

# ACTION PLAN FOR SETTING, ACHIEVING AND PROTECTING STREAM FLOWS



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# **ACTION PLAN FOR SETTING, ACHIEVING AND PROTECTING STREAM FLOWS**

## **PART ONE**

### **I. PURPOSE OF THE ACTION PLAN**

This Action Plan describes specific implementation strategies designed to meet the state's obligations and responsibilities to set, achieve and protect stream flows across the state. The Legislature has indicated its priority for stream flow action both through statute and through its funding of specific programs and activities.<sup>1</sup> As the first set of watershed plans and instream flow recommendations done under the Watershed Planning act come due, the state is at a critical juncture for action.

While complementary to the existing broader strategic plan ("Workplan for Instream Flow Setting Through 2010"), this plan is both more detailed and comprehensive. It is an on-the-ground, short-term plan that includes concurrent work towards the three statewide stream flow goals of setting, achieving and protecting. The Department of Ecology (Ecology) will begin its upcoming efforts by building on the existing work of local planning units, and in all cases will seek out local agreement and cooperation in the development and implementation of this plan.

This Action Plan focuses on water-critical and high priority non-critical watersheds with instream flow recommendations and plans due in 2003 and 2004. It outlines specific watershed-by-watershed actions to be undertaken jointly by the Departments of Ecology and Fish and Wildlife (WDFW) over the next 18 months, in cooperation with local watershed groups, the Tribes, and other major interests. This Plan covers activities for the period from January 2004 through June 2005.

This document begins with the overall plan goals and objectives. Next, the "Overall Approach" section includes Ecology's obligations, the selection criteria for inclusion in the plan, and a matrix of all qualified Water Resource Inventory Areas (WRIAs) with the rationale for their inclusion and the actions to be taken. Part Two discusses various options to meet future water needs proposed in conjunction with instream flow setting, as well as potential tools and actions for achieving and protecting stream flows. In Part Three, specific actions for setting, achieving and protecting flows on a WRIA-by-WRIA basis are detailed.

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<sup>1</sup> The latter includes instream flow work under the Watershed Planning act, the technical and rule-making activities of the Departments of Ecology and Fish and Wildlife, as well as targeted activities such as the Washington Water Acquisition Program, Irrigation Efficiencies Grant Program, stream flow monitoring and water use metering.

## II. PLAN GOALS AND OBJECTIVES

**Vision:** Rivers and streams in our state will have sufficient water when and where it is needed for people, productive agriculture and healthy fish populations.

**Goal:** Moving forward with actions to establish and retain stream flows that are sufficient to protect and preserve instream resources over the long term.

**Objectives:**

- Set instream flows that define flow levels needed for fish and all other instream values, and, if necessary, include provisions for future growth.
- Accelerate and enhance programs and strategies to achieve and protect stream flows.
- Continue support to watershed planning around setting, achieving and protecting stream flows.

## III. OVERALL APPROACH

This section has four parts. In the first, Ecology's obligations under Chapters 90.82 and 90.54 RCW for flow setting are discussed, in addition to Ecology's responsibilities for achieving and protecting flows. Secondly, the specific criteria used for inclusion in this Action Plan are listed, and in part three a matrix that presents an overview of the WRIAs included in this plan and actions to be taken are listed. Finally, guidelines used for setting, achieving and protecting are discussed.

Note: Several policy decisions regarding the timing and deadline associated with watershed planning under Chapter 90.82 RCW have been made by Ecology management. These include:

- Under Watershed Planning, the instream flow recommendation and the plan have different statutory due dates. For efficiency's sake, a policy decision was made to synchronize them. The instream flow recommendation is now due at the same time as the Plan.
- When funding under Chapter 90.82 was first distributed, Ecology provided several watershed planning units with a lump sum upfront. (Later money was released on a cost-reimbursement basis.) For fairness and consistency, The Department elected to provide those early watersheds with an additional year.
- For WRIAs with recommendations due in 2003, Ecology elected to give them until December 31, 2003 to have their recommendations ready.

As a result of these three decisions, watersheds such as the Samish and the Dungeness have had an additional year and a half to develop their instream flow recommendations.

## **1. Ecology Obligations**

This section briefly describes Ecology's statutory obligations around flow setting, as well as actions for achieving and protecting.

### **a) Setting Flows under Chapter 90.82 RCW**

The Watershed Planning act describes specific obligations for Ecology concerning stream flow recommendations developed under different scenarios. (Watershed planning under Ch. 90.82 RCW is often referred to as "the 2514 process," named for ESHB 2514, the bill that established the watershed management planning process.)

#### Scenario 1:

- no existing instream flows in rule, and
- planning units elected to include an instream flow component, then
- approval by the planning unit on an instream flow recommendation is due within four years from the date the planning unit first received Phase II funds.

If approval has been achieved within the allotted timeframe, Ecology will undertake rule making to adopt the flows into rules. Rules may include additional water management provisions as appropriate.

If approval "*is not achieved within four years . . . the department may promptly initiate rule making . . . to establish flows for those streams and shall have two additional years to establish the instream flows for those streams for which approval is not achieved.*" (RCW 90.82.080 (1)(c))

While this statutory language does not state that we must, Ecology has chosen to start right away, building on existing efforts. This decision is based on:

- there are no provisions in statute for extensions;
- the legislative intent for flows to be set throughout the state;
- the critical need to set instream flows in many of the watersheds working under 2514; and
- the desire to capture and use information in a timely manner.

Under these circumstances, Ecology, in collaboration with the planning units, and using existing work and processes will promptly move forward to initiate the rule making by early 2004 for: Samish, Elwha/Dungeness, Quilcene/Snow and the Entiat watersheds.

#### Scenario 2:

- existing instream flows in rule,
- planning unit has requested to modify these flows, and
- recommendation for revised flows comes in on time and with unanimous approval by all members of the planning unit.

In this case, Ecology will undertake rule making to adopt the new flows.

Scenario 3:

- existing instream flows in rule, and
- recommendation to modify the flows does not receive unanimous approval within the timeline set by law.

In this case, if the existing flows are adequate, they will not be modified. If further evaluation is needed, the process to develop recommendations to modify the flows will continue under Ecology's lead. Existing instream flows cannot, however, be modified under RCW 90.82.080. They would have to be modified under a separate process outlined in Ch. 90.54 RCW.

**b) Setting Flows under Chapter 90.54 RCW, the Water Resources Act of 1971**

There are two circumstances under which flows will be set in this Plan under Ch. 90.54 RCW: modifications to existing flows in 2514 watersheds where the recommendation did not come in on time, and in those watersheds outside the 2514 process.

As described in Scenario 3 (above), if recommendations to modify existing flows in watersheds planning under the Watershed Planning act do not come in on time, the flows can only be modified under Ch. 90.54 RCW. This statute lays out the fundamentals of water resource management in the state, including the mandate "*Perennial rivers and streams of the state shall be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values*" (RCW 90.54.020(3)(a)).

Flows set in WRIAs planning outside of the 2514 process will be set under the authority in Ch. 90.54 RCW. There is one non-2514 WRIA included under this plan: WRIA 5, the Stillaguamish. In the case of WRIA 5, Ecology is committed to set flows in consultation with affected Tribes, WDFW, and the local entity dealing with salmon recovery (2496 efforts). As described in the detailed Stillaguamish Action Plan in Part Three of this document, flows will be established in 2004.

**c) Obligations and Responsibilities for Achieving and Protecting Stream Flows**

Several statutes, as well as legislative intent through funding, provide the current impetus for action to achieve and protect stream flows. Relevant statutes include:

- The Water Resources Act of 1971, which requires that "*the quality of the natural environment shall be protected and, where possible, enhanced . . .*" (RCW 90.54.020(3)).
- Watershed Planning describes the state and local responsibility to supply sufficient water for both instream resources and future out-of-stream uses.
- The 1989 Yakima Basin Trust Water Rights Act and the 1991 Water Resources Management Act –created a voluntary mechanism to acquire water rights that can be



transferred to the trust water rights program to meet presently unmet needs, including instream flows for fish.

The legislature indicated its priority for getting real “wet” water into streams when it funded the Washington Water Acquisition and Water Irrigation Efficiencies Grant Programs. Both programs support efforts in the 16 water-critical basins to put water in trust to supply streams with sufficient water to sustain healthy fish populations.

## **2. Selection Process for Action**

Twenty watersheds plans (covering 28 watersheds) and 15 instream flow recommendations are due on or before December 2004. Given the large number of plans and recommendations due within one year, and the urgency for action in the 16 water-critical basins<sup>2</sup>, there is a need to prioritize the watersheds for actions over the next 18 months. The following factors – singly or in combination -- were used in selecting the WRIAs for this Action Plan:

- Instream flow recommendations and watershed plans due by December 2004.
- One of the 16 water-critical basins (see footnote #2).
- No existing instream flows.
- Presence of ESA-listed fish species.
- Growth pressure, especially on rivers with natural low-flow conditions.
- Areas where instream flows will protect the existing flows and prevent degradation.
- Watersheds with instream flow recommendations due after December 2004 which meet all the other criteria and whose flow recommendations are ready.

## **3. WRIAs included in this Plan and Justification**

The matrix on the following page lists all WRIAs that have stream flow recommendations/plans due by December 2004 and/or are water-critical basins. It describes how and if each WRIA fulfills the selection process criteria, and whether and what type of actions (set, achieve and protect), if any, will be taken under this plan.

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<sup>2</sup> “Water-critical basin:” one of 16 over-appropriated watersheds across the state where more water is being withdrawn in all or significant parts of the rivers and streams in the watersheds, especially in late summer early fall, when flows are naturally low and when ESA listed fish species need water for migration, spawning and rearing. In some cases, flows that are too low -- below natural low flows cannot provide sufficient spawning areas to accommodate all returning adult fish. Low flows in the 16 critical basins are major limiting factors to salmon recovery.

In summary, the 17 WRIAs included in this plan are:

Nooksack . . . . . (WRIA 1)	Upper/Lower Chehalis . . . . . (WRIAs 22/23)
Lower Skagit/Samish. . . . . (WRIA 3)	Grays/Elochoman/Cowlitz . . (WRIAs 25/26)
Stillaguamish. . . . . (WRIA 5)	Lewis/Salmon/Washougal . . (WRIAs 27/28)
Nisqually . . . . . (WRIA 11)	Walla Walla . . . . . (WRIA 32)
Quilcene/Snow . . . . . (WRIA 17)	Yakima/Naches . . . . . (WRIAs 37/38/39)
Elwha/Dungeness . . . . . (WRIA 18)	Entiat . . . . . (WRIA 46)

Due to the realities of budget and staffing limitations, not all WRIAs that fulfill one or more of the criteria could be included. It was necessary to prioritize where the greatest urgency and readiness for action exists right now. Ecology, WDFW and other agencies will continue to work with and support watershed planning and stream flow efforts on setting, achieving and protecting being done across the state, through the 2514 and other processes. WRIAs that meet one or more of the selection criteria but are not included in this Plan are listed in Appendix A, along with a brief explanation of their circumstances.

**Factors Considered in the Action Plan Selection Process, and Actions Planned: WRIA-by-WRIA**  
**Shaded WRIAs have a detailed action plan included in this document (see Part Three)**

	Existing Instream Flows	ESA/ Critical Basin	ESA/ Non-Critical Basin	Growth Pressure/ Low Flows	Setting Flows to Prevent Degradation	IF/Plan Rec. due date	Basin included in Action Plan, and Actions Needed*
Nooksack-1	Yes	Yes		Yes		2003	Yes. A & P
San Juan-2	No	No	Yes	Yes		2003	No
Lower Skagit/Samish-3	No	No		Yes	Yes	2003	Yes. S & P
Upper Skagit-4	Yes	No		Yes		2003	No
Stillaguamish-5	No	No		Yes	Yes	2004	Yes. S & P
Snohomish-7	Yes	Yes		Yes		n/a	No
Cedar/Sammamish-8	Yes	Yes		Yes		n/a	No
Duwamish/Green-9	Yes	Yes		Yes		n/a	No
Puyallup/White-10	Yes					n/a	No
Nisqually-11	Yes	No	Yes	Yes		2003	Yes. A & P
Chambers/Clovers-12	Yes	Yes		Yes		2004	No
Deschutes-13	Yes	No		Yes		2004	No
Skokomish/Dosewallips-16	No	No	Yes	Yes	Yes	2005	No
Quilcene/Snow-17	No	Yes		Yes		2003	Yes. S & A & P
Dungeness/Elwha-18	No	Yes		Yes		2003	Yes. S & A & P
Lyre/Hoko/Soleduc/Hoh-19/20	No		Yes	No		2005	No
Chehalis-22/23	Yes	No	Yes	Yes		2003	Yes. A & P
Grays/Elokoman/Cowlitz-25/26	No	No	Yes	Yes	Yes	2004	Yes. S & P
Lewis/Salmon/Washougal-27/28	No	No	Yes	Yes	Yes	2004	Yes. S & P
Walla Walla-32	closed	Yes		Yes		2005	Yes. S & A & P
Palouse- 34	No	No	No	Yes	Yes	2007	No
Middle Snake-35	No	Yes				2007	No. continue A & P work
Yakima/Naches-37/38/39	Court	Yes		Yes		2003	Yes. continue A & P work
Upper Crab/Wilson - 43	No	No	No	Yes	Yes	2006	No
Wenatchee-45	Yes	Yes				2006	No. continue A & P work
Entiat-46	No	No	Yes	Yes	Yes	2004	Yes. S & P
Methow-48	Yes	Yes		Yes		2003	No. continue A & P work
Okanogan-49	Yes	Yes				2008	No. continue A & P work
Moses Coulee/Foster Creek-44/50	No	No	Yes			2004	No
Little/Middle Spokane-55/57	Yes/No	No	No	Yes	Yes	2004	No
Hangman-56	No	No	No	Yes	Yes	2004	No
Colville-59	Yes	No	No	Yes	Yes	2004	No
Pend Oreille-62	No	No	No			2004	No

\* S=Setting A=Achieving P=Protecting

#### **4. Guidelines for Specific Actions for Each Watershed**

In this Plan, actions for setting, achieving and protecting were designed in accordance with certain guidelines.

Stream flow recommendations submitted to Ecology must be:

- Legally defensible and scientifically supported; and
- Developed with the collaboration and participation of local and state governments, the Tribes and key interests.

Concurrently with setting, actions towards achieving and protecting flows will be occurring. These will include:

- Beginning implementation of early actions identified or supported by watershed planning groups. The early actions should further the watershed planning units' strategies to provide sufficient water for out-of-stream uses and instream values.
- Continuing to tailor stream flow augmentation efforts (water right acquisition and irrigation efficiencies) to the 16 water-critical basins, and focus on streams and reaches most biologically important for fish production, especially where chronic low flows impede fish recovery. These restoration efforts may be important to protecting and stabilizing fish populations.
- Developing, implementing and maintaining effective stream flow monitoring and compliance programs.
- Supporting the development of long-term water supply strategies during Phase 4 implementation.
- Coordinating flow-achieving programs and activities with other habitat restoration and recovery strategies and work.

## **PART TWO**

### **SETTING, ACHIEVING AND PROTECTING FLOWS**

In this part, we take a closer look at defining and describing the processes of setting, achieving and protecting stream flows. Issues of concern in relation to each action are discussed.

#### **I. Setting Flows: Regulatory Flows and Allowance for Future Water Use**

Over the years, and in several statutes, the legislature has instructed Ecology to set stream flow levels in rule in order to protect and preserve instream resources. Taken together, the various statutory directives were recently clarified as “instream flows that are sufficient to protect and preserve instream resources and values over the long term.”<sup>3</sup> Such a flow is referred to in this document as a **regulatory flow**, since historically its purpose has been to determine whether and under what conditions new water rights could be issued.

##### **More detail on Regulatory Flows**

A regulatory flow is defined as *a stream flow regime set in rule*. Regulatory flows do not affect existing water rights, rather they protect instream resources from future water withdrawals. They are, in effect, a water right for fish and instream values. Regulatory flows do not put water in streams. In setting regulatory flows, one must consider both *specific flow levels* and the *frequency* with which certain flows need to occur. For a regulatory flow to meet the statutory objectives it must protect the higher, less frequent flows that serve important biological and physical functions within a river system.

##### ***Priority Dates and Strategies under the Watershed Planning act:***

In a discussion of establishing regulatory flows under the umbrella of Chapter 90.82 RCW, two important factors must be considered. These are priority dates and strategies for supplying sufficient water for both instream and future out-of-stream uses.

Flows adopted under Chapter 90.82 RCW will have a priority date of two years after the planning unit first received funding from Ecology. For most watersheds in this Plan, the statutory priority date is June 12 or July 7, 2000. This means that any water right issued after those dates will be junior to the regulatory instream flows, and therefore may include restrictions or conditions. (Flows adopted under Ch. 90.54 RCW will have a priority date of the date of adoption.) In most WRIAs – and especially those where flows have been significantly reduced by past development -- setting an instream flow level that satisfies the statutory requirement to protect and preserve instream resources will be a flow level that will condition any water rights issued junior to the instream flow right.

<sup>3</sup> A Guide to Instream Flow Setting in Washington State, March 2003. Ecology publication # 03-11-007: p23.

At the same time, there is a requirement under the Watershed Planning act that planning units come up with “*strategies for increasing water supplies in the management area . . . the objective of these strategies is to supply water in sufficient quantities to satisfy the minimum instream flows for fish and to provide water for future out-of-stream uses for water. . . . (RCW 90.82.070(2))* While the watershed plan should identify strategies that may/can be used, it will not be until the implementation phase, and beyond, that many of these strategies will be realized on the ground.

***Regulatory flow rules with provisions for allowing future water use:***

The planning units and Ecology are faced with what can seem like irreconcilable requirements: regulatory flows that are high enough to protect instream resources, are achievable, and will allow for future out-of-stream uses – and the need to start action now. This is particularly true in basins where water availability is already a problem. To address the issue of protecting instream values and allow for future development concurrently, many watershed planning groups are looking to crafting regulatory flow recommendations that also provide a framework and/or provisions for allowing future water use.

Note that allowance for future water use is limited to *residential domestic and other small uses*. In general, water for agriculture, municipal, commercial and industrial uses will need to be dealt with through the permitting process and may result in interruptible water rights.

For regulatory flow rules with future water use provisions to be adopted, they must clearly and in detail specify the criteria and process for using one of several legal mechanisms. As more water becomes available as planning groups begin implementing their strategies, we will have a set of conditions and a process in place that can allow for the issuance of new water rights. The four legal mechanisms being considered are:

- setting aside or reserving an amount of water for future uses not subject to regulatory flows;
- modifying existing stream closures to allow some flexibility in addressing future water needs;
- allowing ground water withdrawals under the statutory exemption;
- approving mitigation that provides water-for-water to offset any potential adverse impacts on flows.

One or more of these mechanisms are most easily applied in watersheds where there is water available for appropriation above the regulatory flow. (A more detailed description of each mechanism is included below, “A Closer Look at Legal Mechanisms.”) However in watersheds where the use of reservations, closures and ground water exemptions would conflict with a regulatory flow, they cannot be used without water-for-water mitigation to offset potential impacts to maximum extent possible, and/or unless there is a finding of *Overriding Consideration of the Public Interest*, or OCPI.

Mitigation should be considered the first line of defense, when use of these three mechanisms would conflict with the regulatory flow. If a mitigation plan is not ready for implementation at the time the rule is crafted (for example, the use of storage, which requires a large infrastructure to design, put into service and support), then use of OCPI can be considered. Under these circumstances OCPI should be for short-term, time-limited use until mitigation can be delivered.

## **1. Application of Overriding Consideration of Public Interest (OCPI)**

The Water Resources Act of 1971 requires that rivers and streams of the state must be retained with stream flows that protect and preserve instream values. However, it goes on to state:

*Withdrawals of water which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served. (RCW 90.54.020(3)(a))*

There is no policy guidance in statute on the standards to use in making a determination of what constitutes an overriding consideration of the public interest, or OCPI. OCPI can only be considered against regulatory flows established to protect fish and other instream values. It cannot be used if future withdrawals of water would impair existing water rights.

A finding of OCPI to authorize the withdrawal of water in apparent conflict with established instream flows has not been done at a watershed scale. The case law appears to call for a case-by-case basis (individualized) determination.

However, legal cases have provided some general guidance. It is clear that the OCPI exception is for proposed appropriation that would serve the *public*, as opposed to *private*, interest, and it requires that the public interest be so great as to override the harm to public interests in protecting and preserving instream flow values. Approval of OCPI has to meet a very high standard. In other words, it should only be used as a last resort. It must be clearly demonstrated that all other possibilities to obtain water have been considered.

While application of OCPI should generally be limited to short-term, time-limited water uses, there may be situations where OCPI can be applied to authorize future withdrawal of small amounts of water on a permanent basis, and under some strict conditions (e.g., conservation, drought management, in-house use only, water for water mitigation within proximity of the withdrawals.)

## **2. A Closer Look at the Legal Mechanisms**

Ecology will assist planning units with developing recommendations using these four options (in conjunction with mitigation and OCPI, as needed) when proposing future water uses with flow recommendations.

### **a. Reservation of Water for Future Use**

The Water Resources Act authorizes Ecology, by rule adopted pursuant to Chapter 34.05 RCW to: “*Reserve and set aside waters for beneficial utilization in the future*” (RCW 90.54.050(1)). A *reservation* of water is a certain amount of water that is set aside by rule for a particular future use. There must first be a determination that water is available. And because of the statutory priority of regulatory flows recommended under Chapter 90.82 RCW, in general any reservation will be subject to such flows, unless OCPI was applied.

Water can be reserved from:

- ground water sources determined not to be in continuity with the rivers/streams;
- surface water sources, if water is determined to be available;
- water available through the trust water rights program, if it is consistent with the purpose of the program; and
- water available through mitigation, transfers, surface or ground water storage, reuse, conservation, diversion reduction agreements and other means.

### **b. Stream Closures**

Some watershed planning units are looking at making recommendations to modify existing closures. This may be to change full closures to partial, or to eliminate closures to allow for future uses. The planning units will have the burden to prove that water is available for appropriation, that the proposed appropriation will not impair existing water rights, and that flows would not be lowered below those necessary to adequately support fish. (Note: a discussion of establishing new closures is included at the end of the Setting section.)

### **c. Ground Water Exemption**

The Ground Water Code, specifically RCW 90.44.050, allows individuals to use small amounts of ground water without having to obtain a water right permit from Ecology. A “small amount” is defined as up to 5,000 gallons per day for single or group domestic uses, stockwater or industrial purposes, or up to one-half acre for irrigation of a lawn or non-commercial garden.

While the exemption has historically served a useful purpose, in recent years it has been frequently, and often improperly, used to provide water for development in suburban areas. Use of the exemption in closed and over-appropriated basins and streams makes efforts to protect regulatory flows all the more problematic since exempt withdrawals commonly draw upon aquifers that are in continuity with streams.

Use of the ground water exemption by applying OCPI will be tied to a commitment by Ecology and the county to manage the location of the wells. In addition, the county may be asked to restrict the amount of water used both indoors and outdoors by passing ordinances or conditioning building permits. For example, outdoor water use may be restricted if regulatory flows are not being met.



#### **d. Mitigation**

Ecology and watershed planning units are exploring strategies that allow for the future water provisions without negative impacts to instream flows and other environmental values. The Water Codes allow applicants for water right permits to include *mitigation plans* as part of their proposals to offset any potential adverse effects of their proposed water use (RCW 90.03.255; RCW 90.44.055). Mitigation plans may also be the result of settlement discussions around permit applications that are denied. Ecology then reviews the measures in conjunction with its overall evaluation of the application or agreement and decides if the measures proposed will achieve the desired results, allowing the Agency to issue the permit. Mitigation plans are subject to Ecology's approval.

Mitigation plans can be included in watershed plans and may be adopted by Ecology by rule in conjunction with setting regulatory flows. Mitigation is voluntary and cannot be required of future applicants who may decide to propose their own mitigation plans. Plans should first of all ensure that there is *no additional impact on flows*. From there, it is often possible to provide some *additional benefit to flows*. Most mitigation strategies are “in-kind,” that is, designed to replace exactly what is used: “water-for-water,” same time, same place, same amount.

#### ***Setting Regulatory Flows v. Closures***

An alternative to setting regulatory flows to protect instream resources and existing water supplies would be to close a stream or basin. This means to close it to any further appropriations. Stream closures have been used over the past 30 years to protect instream resources. Closures are “findings” of the unavailability of water.

In general, a closure is less protective of instream resources than the establishment of a regulatory flow. A closure also tends to be a less flexible tool with which to address future water right decisions than is the establishment of a regulatory flow. For example, a year-round closure precludes use of off-stream storage of water in the winter (when water may be available). Mitigation opportunities or alternative water use strategies like aquifer storage and recovery (ASR) are not available in a closed basin. Finally, a closure may be reversed by rule at some time in the future.

Most existing closures were done in conjunction with setting flows, and closures are still best considered when coupled with the establishment of a regulatory instream flow. In that case, an instream flow right is established and the closure would be a clear signal that no new water is available in the basin.

## II. Achieving and Protecting Flows

In many watersheds, current water conditions are simply too poor to sustain most life stages of fish. Water withdrawals, impoundments, and land use changes have caused extremely low flows in more than a dozen river drainage systems. In November 1999, the Washington Statewide Strategy to Recover Salmon classified watersheds with shortage of water for fish as critical basins. There are 16 critical basins out of the state's 62 watersheds. The 16 critical basins (*see list below, and map at the end of this section*) are also referred to as “over-appropriated,” meaning more water has been legally allocated than is naturally available.

### List of critical basins

Eastern Washington	Western Washington
<ul style="list-style-type: none"><li>▪ Lower Yakima</li><li>▪ Methow</li><li>▪ Middle Snake</li><li>▪ Naches</li><li>▪ Okanogan</li><li>▪ Upper Yakima</li><li>▪ Walla Walla</li><li>▪ Wenatchee</li></ul>	<ul style="list-style-type: none"><li>▪ Cedar-Sammamish</li><li>▪ Chambers-Clover</li><li>▪ Duwamish-Green</li><li>▪ Elwha-Dungeness</li><li>▪ Nooksack</li><li>▪ Puyallup-White</li><li>▪ Quilcene-Snow</li><li>▪ Snohomish</li></ul>

In these 16 critical watersheds, inadequate stream flows are particularly common in late summer and early fall when human consumption and agricultural demands are at their highest — the same time fish need water for migration, spawning or rearing. Low summer stream flows can also raise water temperatures and concentrate pollutants that can harm or even kill fish.

In the 16 critical basins as well as other watersheds with chronic low-flow conditions, simply setting new, or amending existing, instream flows will not increase the amount of water available to support instream resources. The most important and immediate need is to put water back into rivers and streams to help fish recovery.

This emphasis on getting more actual “wet” water back in streams has been expressed by the Legislature through passage of several key provisions and funding to allow Ecology to acquire water rights on a voluntary basis and hold that water in trust to increase stream flows for fish and/or provide water for out of stream uses. This legislative impetus for getting more water in streams is also expressed in Watershed Planning requirement for detailed strategies and implementation plans to provide sufficient amount of water for fish and future out-of-stream uses.

### ***Achievement indicator flows***

The requirement, under RCW 90.82.070(2), for watershed planning units to come up with strategies “to supply water in sufficient quantities to satisfy the minimum instream flows for fish...” is proving to be a significant challenge, particularly in the critical basins. The regulatory flow, while set to protect the fish and instream resources and provide a basis for water

management decisions, normally does not occur annually or on a frequency useful for providing a short-term indicator of increasing flows.

Many planning groups are considering developing a voluntary flow regime to guide flow achieving efforts, in addition to the regulatory flow. This flow measure will provide a sense of tangible progress towards the goal of providing sufficient quantities of water to satisfy fish needs and protect all instream values. It will define flows that could reasonably be measured and achieved within a defined time frame, with a relatively specific set of projects or actions, and it can be adjusted as the circumstances and goals of a particular watershed change. It can be achieved through voluntary agreements with existing diverters and by implementing strategies to provide sufficient amounts of “real” water in the stream to improve fish populations and the habitat they rely on.

This achievement indicator flow is referred to by many different terms, such as a “target,” “restoration,” or “planning unit” flow. A flow achieving indicator is not defined in statute and has no defined role in water right decisions. The specific flow numbers will be determined by watershed planning units’ technical teams with assistance from Ecology, WDFW and affected Tribes. In a given river, the regulatory instream flow must be higher than an achievement indicator flow in order to protect any flows acquired and put in streams as a result of public and private projects or actions.

#### ***Tools and actions for achieving and protecting instream flows***

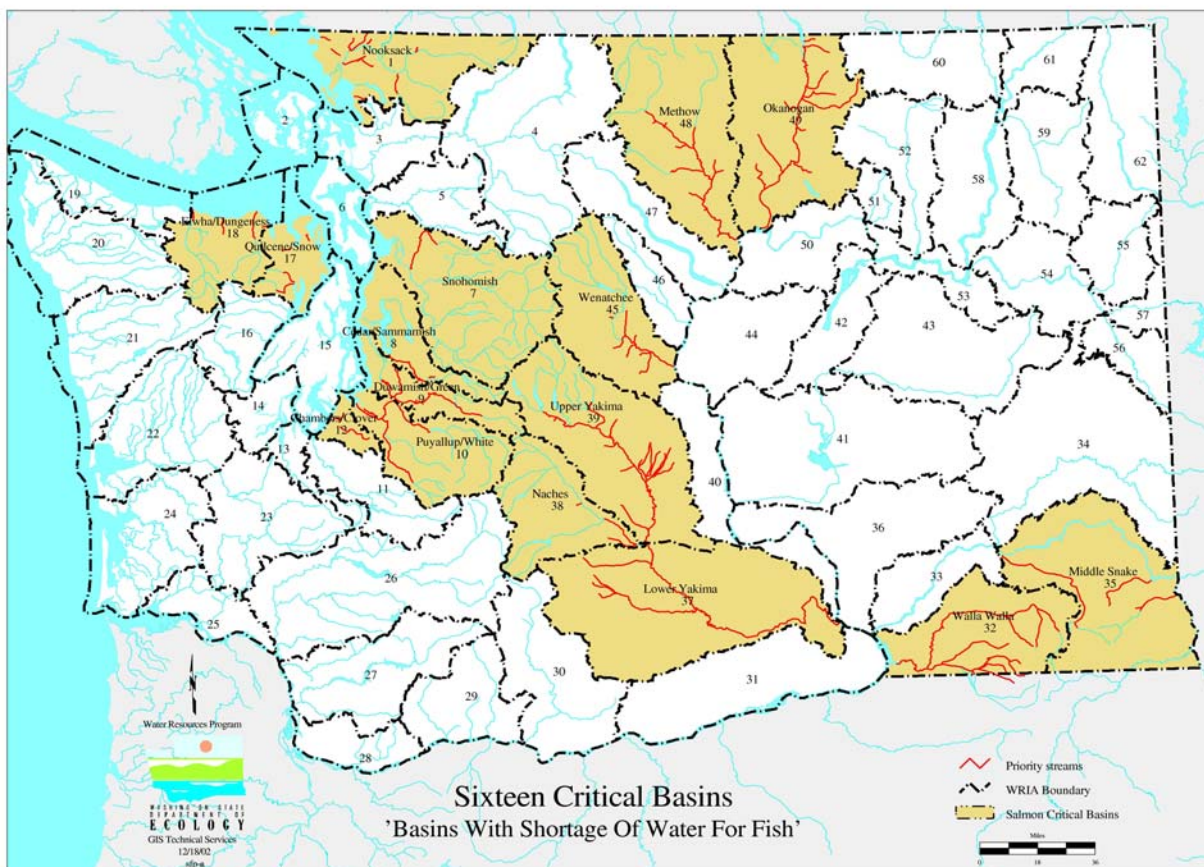
There are several regulatory and incentive-based mechanisms for putting water back into a stream and preventing further flow declines. They include:

- Water right acquisitions through purchases, leases, donations and other means.
- Flow augmentation from water conservation and reuse projects.
- Water releases from existing and new water storage projects, including surface and underground structures.
- Water releases below hydropower projects to protect stream flows.
- Enforcement activities against illegal uses and excessive water waste.
- Stream habitat restoration projects implemented by various watershed groups such as lead entities established under the Salmon Recovery Planning Act.

Appendix B lists a number of specific tools and actions for achieving and protecting instream flows. When selecting tools and actions for achieving flows, the following objectives will be considered:

- Focus flow restoration efforts to areas most biologically important for fish and where chronic low flows are predominant factors limiting fish recovery.
- Provide a sufficient amount of water to meet stream flow requirements for fish populations within priority critical basins.
- Engage local watershed communities and gain public trust and acceptance of the need to achieve stream flow requirements for fish and instream resources.
- Ensure cost-effective and efficient use of state and federal investments.
- Ensure monitoring programs are in place.

**Map – Sixteen critical basins targeted for flow restoration**



### **PART THREE**

#### **WATERSHED BY WATERSHED ACTIONS**

The following section reviews specific actions, with timelines and responsible parties, for setting, achieving and protecting flows on a watershed-by-watershed basis. The Action Plan builds on existing planning group efforts, including the technical work and any regulatory flow recommendations and planning strategies that have been, or are in the process of being, developed.

For each WRIA, an overview of the watershed is provided and then the specific activities to be undertaken by Ecology, WDFW, watershed planning units and others are described. In most watersheds, the tasks focus on setting regulatory flows where none exist; adoption of provisions for future water uses, where appropriate; and implementation of early and short term actions to begin or continue to restore flows in critical and priority basins. The specific actions described will occur concurrently with watershed planning units developing detailed strategies and implementation plans.

The Action Plan is not inclusive of all flow restorations efforts underway in every watershed, rather it highlights actions that are under Ecology and its partner agencies' authority and responsibility.

## **1. Nooksack WRIA 1**

### **Overview of watershed**

- Key water challenges: limited water supplies to meet current and future needs, ESA listings, water quality degradation, and public health concerns about drinking water supply.
- Instream flows were established by rules in 1985. Over the years many questions have been raised as to whether those flows are adequate, particularly in light of advances in science and the listing of salmon and bull trout.
- Watershed Planning was initiated in 1998 by Whatcom County, City of Bellingham, Public Utility District No. 1, Lummi Nation, and Nooksack tribe. The initiating governments created a joint board, in 1998.
- In addition to water quantity, the planning unit has opted to address modifying existing instream flows, water quality, and fish habitat.
- Extensive instream flow technical studies have been done by Utah State University. WDFW and Ecology have been involved in the design and discussion of the studies.
- The Lummi Nation has stated a desire to use the watershed process as the basis of establishing and quantifying a time-immemorial treaty-based right to instream flows for fish.
- The watershed plan and recommendation to modify existing instream flows were due in October 2003. To date neither instream flow recommendations nor plan have been approved by the Planning Unit and the County.
- The Planning Unit is working on an instream flow action plan outlining the process, schedule and budget needed to come up with instream flow recommendations. The plan is expected by March 2004. Actual recommendations for modifying instream flows may not come for another couple years after that. The planning unit may seek changes to existing closures to allow consideration of water management options for future uses.
- A separate, yet related Comprehensive Irrigation District Management Plan (CIDMP) plan, defined by the Agriculture, Fish and Water process, is being developed in the Bertrand Creek sub-watershed. The plan is intended to meet the requirements of the Endangered Species Act (ESA) and the Clean Water Act (CWA) and to solve the problems of illegal water use. A watershed improvement district (WID) is being formed in Bertrand sub-watershed, where no irrigation district exists. The WID will have the authority to implement instream and out-of-stream management practices that are consistent with existing and anticipated instream flow requirements. The WID will work with the federal services and Ecology in preparing the plan to ensure that it will meet the requirements of the ESA and CWA. (A fact sheet about CIDMPS and how it fits into the 303(d) listing and TMDL processes is available from Ecology's Water Quality Program.)

<b>Actions: Modify, if needed, and Achieve and Protect Instream Flows in the Nooksack WRIA 1</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Ecology, in the absence of getting recommendations from the Planning Unit to modify existing flows within the statutory deadline, announces its decision to maintain existing instream flows at this time. Any future changes to the instream flows will be done under Chapter 90.54 RCW.</li> <li>2. Continue to support the Planning Unit work on their Instream Flow Action Plan: <ul style="list-style-type: none"> <li>• continue public education and outreach on instream flows needs to build public understanding and acceptance;</li> <li>• carry out instream flow discussions in various drainages/groups of drainages in the Nooksack watershed;</li> <li>• develop instream flow recommendations, including flows targeted for restoration, and strategies to attain those flows;</li> <li>• continue to monitor and assess Tribal interests in the use of a federal negotiating team to resolve tribal water interests re: instream flows; and</li> <li>• participate in the Joint Board Instream Flow Working Group (JBISFWG) approval of the Planning Unit's Instream Flow Action Plan scheduled for March 2004.</li> </ul> </li> <li>3. Work with Joint Board to complete paper on Federal Reserved Water Rights and the Settlement Process and distribute the information in early 2004.</li> <li>4. Work with the newly established Watershed Improvement District Technical Committee to develop specific recommendations on how to address illegal water uses in Bertrand Creek and assist in coordinating the effort with the Planning Unit. Efforts in Bertrand Creek could include habitat improvements, changes in land use, changes in on-farm management practices, water right changes, conservation, creative mitigation proposals, etc.</li> <li>5. Any changes needed to the existing instream flows and closures in Bertrand Creek will be evaluated and coordinated with the Planning Unit and other groups in the watershed planning process and will serve as the basis for recommended changes to the existing rule (Chapter 173-501 WAC)</li> <li>6. Continue to maintain the gauges and collect real time continuous flow data to monitor flows, determine the adequacy of the existing instream regimes set by rules in 1985 and protect those flows</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Watershed Improvement District (WID) in Bertrand Creek could be a good test arena for implementing more efficient use of water; improving fish habitat conditions for salmon recovery; implementing an effective water management program and resolving at least some instances of illegal water use within Bertrand Creek.</li> <li>• Recommendations from the WID process will serve as the basis for recommended changes to Chapter 173-501 WAC.</li> <li>• The Planning Unit's Instream Flow Action Plan, once approved and implemented, will be a critical element in determining whether existing instream flows and closures need to be modified and what strategies should be implemented to provide sufficient amount of water for instream and future out of stream uses.</li> </ul> <p>Better public understanding of instream flows and water rights and tribal claims to water and the alternative ways of resolving these issues. Also public will be more educated about Federal reserved rights and the use of a federal negotiating team.</p>

<b>Timeline</b>	<ul style="list-style-type: none"><li>• Federal reserved rights paper released by Jan. 31, 2004</li><li>• Approval of Planning Unit's Instream Flow Action Plan by March 2004</li><li>• Work in Bertrand Creek drainage to start in January 2004.</li><li>• If needed and supported, proposed changes to instream flows for Bertrand Creek by October 31, 2004</li></ul>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"><li>• Over 70% of the watershed lead's time in the Field Office will be to continue playing a lead role for the instream flow work, the Watershed Improvement District process, and specific water actions for Bertrand Creek. Ecology's tribal liaison will also assist in the Instream Flow effort.</li><li>• X% of the NWRO hydrogeologist may be necessary to evaluate where seasonal closures (instead for year-around closures) may be effective in addressing both instream and out-of-stream needs.</li><li>• Support from WDFW to evaluate adequacy of existing regulatory flows and benefits/impacts of any changes to those flows and year round closures; and to evaluate WID habitat-related activities.</li></ul>
<b>Responsible Entity</b>	Ecology working collaboratively with the Watershed Planning Unit, the Tribes, WDFW, the Watershed Improvement District, and consultants involved in any of the key tasks described above.



## **2. Lower Skagit/Samish WRIA 3**

**Note:** This Action Plan focuses on the Samish sub-basin—part of WRIA 3. A background on instream flow activity in both watersheds is included first.

### **Background on recent instream flow developments in Lower and Upper Skagit (WRIAs 3 and 4):**

- a) The two WRIAs are non-critical basins with recently adopted instream flows. In April of 2001, Ecology adopted Chapter 173-503 WAC, Instream Resources Protection Program for the Lower and Upper Skagit Water Resources Areas (WRIA 3 and 4), excluding the Samish River sub-basin and the islands within the two WRIAs. All new surface water diversions and ground water withdrawals including exempt withdrawals (Chapter 90.44.050 RCW) granted after the effective date of the rule are subject to the rule and would be interruptible if the flows were not being met.
- b) In April of 2003 Skagit County filed a lawsuit against Ecology requesting “invalidation of only those portions of WAC 173-503 necessary to ensure Skagit County’s ability to authorize subdivision and development using exempt wells in areas of Skagit County not served by public water systems as reserved by Skagit County in the 1996 MOA.” The following parties intervened in the case: City of Anacortes, Skagit County PUD, Sauk-Suiattle Indian Tribe, Upper Skagit Indian Tribe, and the Swinomish Indian Tribal Community.
- c) Ecology has filed a CR-101 to initiate rule making to allow for limited new withdrawals in the Upper Skagit and portions of the Lower Skagit, when mitigation is provided under an approved plan. In the Lower Skagit the rule amendment may include the Coal Creek, Hansen Creek and Nookachamps sub-basins in WRIA 3; the other sub-basins are in WRIA 4. These new withdrawals would not be interruptible if they are part of the approved mitigation plan. It is anticipated that future water allocation budgets will be set for tributary basins. The allocation budgets would range from 0.05cfs to 0.15cfs.
- d) If the parties to the litigation reach a settlement agreement on the sub-basin water budgets, sub-basin management and the mitigation plan, Ecology will proceed with rule amendment. Current discussions call for the rule making process to be completed toward the end of 2004. **Ecology will not be amending the instream flow levels that are set in the existing rule.**

### Lower Skagit/Samish--WRIA 3 Sub-basin

- The Samish Basin lies within the Northern Puget Lowland, northwest Skagit County and southwest Whatcom County. It has been divided into four sub-basins: Upper Samish, Friday Creek, Thomas Creek, and Lower Samish.
- The surface water supplies in the Samish Basin are predominantly generated by rainfall events, which result in a hydrograph that peaks in the winter months. Streams during low flow periods are fed primarily by ground water inflow.
- Watershed planning was initiated in 1998. Skagit Council of Governments is the lead agency. The initiating governments along with the Swinomish Tribe agreed to focus the efforts on the Samish River sub-basin and on the following goals in order of priority: 1) instream flow setting; 2) meet instream flow needs; 3) meet current out-of-stream needs; 4) meet future out-of-stream needs; 5) develop strategies for increasing water supplies.
- Duke Engineering & Services, Inc. conducted an instream flow study on the Samish Basin using IFIM. Fieldwork was performed from February 2000 through May 2001. The IFIM study for the Samish Basin was done for the Samish River, Friday Creek, and Silver Creek. Duke Engineering summarized what they determined as the most advantageous flows for fish based on their instream flow assessment using the IFIM results.
- Subsequently, WDFW made an instream flow recommendation for the Samish River, in consultation with instream flow biologists from Ecology and the Skagit System Cooperative. An analysis of natural flows in the Samish River indicates that the instream flows recommended by the biologists for rule adoption are met only infrequently, particularly during the summer months.
- A draft Samish Management Watershed Plan has been prepared, but not yet approved for adoption by the Planning Unit, or the Counties. The draft plan contains water resource management strategies for meeting out-of-stream needs, such as mitigation, agricultural water banks and reservation for use of ground water exempt wells for domestic purposes.
- On December 10, 2003 the Samish Watershed Planning Unit Steering Committee did not reach consensus on the minimum instream flow recommendation contained in the draft watershed management plan. As a result of that vote, Ecology's understanding is that any Samish River watershed plan developed under RCW 90.82 will not contain a stream flow recommendation.

<b>Actions:</b> Set Instream Flows and Adopt Water Management Provisions in rule for the Samish Sub-Watershed (WRIA 3); and Protect the Regulatory Flows	
<b>Key tasks planned</b>	<p>As a result of the vote by the Steering Committee to not recommend instream flow levels to Ecology, and pursuant to RCW 90.82.080(1)(c), Ecology will now take responsibility for establishing a minimum instream flow for the Samish River. The Planning Unit will be involved in drafting of the rule for instream flow setting and for allowing certain provisions for future water use</p> <ol style="list-style-type: none"> <li>1. Review with the planning unit Ecology's schedule and rule development plan and continue to seek acceptance by the Planning Unit, Tribes, County and other interests in the sub-basin, of the instream flow regimes and provisions for allowing future water use</li> <li>2. Finalize rule development plan and file with the Code Reviser the intent to adopt a rule (CR 101)</li> <li>3. Consult with the Tribes on the instream flow levels</li> <li>4. Prepare Small Business Economic Impact Statement (SBEIS) and economic analysis</li> <li>5. File the draft rule with the Code Reviser (CR 102), the SBEIS and draft economic analysis completed</li> <li>6. Hold public workshops, and hearings</li> <li>7. Complete the rule making process, and file final rule with Code Reviser (CR 103), adopting a rule that sets instream flow levels and provides for options to meet future water use. The instream flows will have a seniority date of July 1, 2000</li> <li>8. Evaluate the adequacy of the existing stream flow monitoring system, and if needed, coordinate with the PUD and/or the county the installation and maintenance of additional gauges to use as control points and to monitor and protect the instream flow levels once set in rule.</li> <li>9. Develop and implement an instream flow monitoring and compliance program to protect adopted flows. A 1-800 call-in number will be established for recording and regulating interruptible water rights</li> <li>10. Continue to assist and provide technical and financial support to the Planning Unit in developing detailed strategies for instream and out-of-stream needs and providing Ecology with a detailed Phase IV Implementation Plan that can be approved by the Agency.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Instream flow protection is in place</li> <li>• Water management provisions are adopted to facilitate the approval of future water use</li> <li>• Monitoring and compliance program is in place by the time the instream flows and future water use provisions are set by rules</li> <li>• Monitoring and compliance program will ensure that mitigation, water banking and other tools are achieving the desired results.</li> </ul>

<b>Timeline</b>	<ul style="list-style-type: none"><li>• File CR 101 early February 2004</li><li>• March to June draft rule language for setting instream flow and allowing future water use, discuss with the planning Unit, consult with the Tribes and hold public workshops</li><li>• Filing Draft rule--CR 102 June 2004</li><li>• Filing final rule--CR103 and Adoption of rule December 2004, with effective date of January 2005. This schedule will be coordinated as much as possible with the rule amendment for Upper/Lower Skagit</li><li>• Additional gauges will be installed in spring/early summer 2004</li><li>• Instream flow monitoring and compliance program will be in place end of summer 2004</li></ul>
<b>Staffing &amp; Funding</b>	<p>Ecology may provide funding to install and operate 2 to 3 continuous gauges, if needed</p> <p>X% of FTEs of specific staff such as watershed lead, technical staff (Ecology and WDFW), rule writer and coordinator, outreach staff and surface water monitoring staff</p>
<b>Responsible Entity</b>	Ecology in cooperation with WDFW and with active participation of the Planning Unit, Tribes and the County

### **3. Stillaguamish WRIA 5**

#### **Overview of the watershed**

- The Stillaguamish River is the fifth largest tributary to the Puget Sound. The watershed is divided into three large sub-basins—the North Fork, the South Fork, and the lower mainstem. The three largest tributaries include: Pilchuck Creek, Deer Creek, and Canyon Creek.
- Over 76% of the land cover is in forestry. Agricultural farms and dairies are concentrated in the valley bottoms along the mainstem and larger tributaries. Rural residential development and hobby farms are increasing throughout all rural areas of the watershed.
- The Stillaguamish system supports five species of salmon—Chinook (listed as threatened under ESA), coho (depressed population), pink, chum, and sockeye; and two species of anadromous trout—bull trout and cutthroat.
- There are many habitat limiting factors (e.g., temperature, sediment, altered streamflows, loss of estuarine habitat) negatively affecting the salmon population and their ecosystem. Most factors are result of upland forestry activities.
- Low flows during summer months are a natural condition for some parts of the basin. Sever summer low flow conditions in 1987 resulted in substantial reduction in coho smolt population. The North Fork, Pilchuck Creek, and the lower mainstem are some of the Low flow problem areas in the watershed.
- A streamflow study was initiated in the Stillaguamish River in the early 1980s. The study was sponsored by Stillaguamish Tribe and U.S. Geological Survey. The study was not completed nor officially agreed upon for use in setting instream flows.
- The Stillaguamish is not a 2514 watershed. Instream flow work is being conducted by Ecology in cooperation with WDFW and the Tribes. A Stillaguamish Salmon Recovery group (2496 entity) is also being consulted to ensure that the 2496 Lead Entity incorporates the instream flow analysis and recommendations into its salmon recovery strategy.

<b>Actions: Set and Protect Instream Flows in the Stillaguamish (WRIA 5)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Complete studies and analysis</li> <li>2. Initiate negotiation, consultation with Tribes</li> <li>3. Prepare Small Business Economic Impact Statement (SBEIS), economic analysis and SEPA checklist</li> <li>4. File CR -102, SBEIS, economic analysis and SEPA</li> <li>5. Hold public meetings and hearings</li> <li>6. Adopt rule for the mainstem and North and South Fork and several tributaries. The rule may include some provisions for future water allocation.</li> <li>7. Coordinate and assist Stillaguamish Salmon Recovery group (2496 entity) with development of detailed strategies for instream flows if instream flows are part of the habitat recovery plan.</li> <li>8. Implement a stream monitoring system of 8 real-time gauges and 6 staff gauges, with the help of local and Tribal governments to use as control points to set and protect instream flow regimes.</li> <li>9. Establish a 1-800 call-in number for instream flow recording and for regulating interruptible water rights.</li> <li>10. Monitor junior surface water withdrawals to ensure compliance with instream flow conditions</li> <li>11. Conduct field surveys to detect any unauthorized diversions, and begin taking action against illegal water uses.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Instream flow data and analysis documentation</li> <li>• Instream flow regime is adopted in rules and water rights for instream flows on the North and South Fork, and mainstem Stillaguamish Rivers are established with priority date of 2004.</li> <li>• Instream flow monitoring program is in place to protect adopted flows</li> <li>• Compliance strategy is in place and actions are taken against illegal uses</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Studies and analysis completed by December 2003</li> <li>• Begin consultation with the Tribes starting in January and going through March 04, concurrently engage local entities in discussion and negotiation of flows</li> <li>• Final SBEIS and draft economic analysis by March 2004</li> <li>• Filing of CR 102 by May 2004</li> <li>• Hold public hearings in June 2004</li> <li>• Adopt rules by September/October 2004</li> <li>• Surface water gauges are installed by March 2004</li> <li>• Monitoring and compliance program is in place by summer 2004</li> <li>• Compliance/enforcement report is available in fall 2004</li> </ul>
<b>Staffing and Funding</b>	<ul style="list-style-type: none"> <li>• \$2,500 for completing studies and analysis</li> <li>• Technical staff (biologist) from Ecology and WDFW to develop biological recommendations and participate in the negotiation and consultation with the Tribes and local entities.</li> <li>• Staff to prepare rule development plan, draft rules, and coordinate the public meetings and hearings and rule adoption</li> <li>• Staff to prepare SEPA, SBEIS and economic analysis</li> </ul>

	<ul style="list-style-type: none"><li>• About \$90,000 to install and maintain continuous and manual gauges and establish a monitoring program</li><li>• X% of FTEs of Ecology's regional and SW monitoring staff, and WDFW staff to develop monitoring and compliance program</li></ul>
<b>Responsible Entity</b>	Ecology in cooperation with WDFW, consultation with Stillaguamish and Tulalip Tribes and active participation of the Stillaguamish River Implementation Committee (SIRC), and with active participation of local salmon recovery group (2496) and other interests

#### **4. Nisqually WRIA 11**

##### **Overview of the Watershed**

- The Nisqually watershed has seven sub-watersheds: Mashel, McAllister, Muck/Murray, Tanwax/Kreger/Ohop, Toboton/Powell/Lackamas, Yelm, and Upper basin.
- The watershed boasts a number of native salmon runs. Chinook and Bull Trout are listed as threatened under the federal ESA.
- Ecology adopted, in 1981, an instream flow rule for the Nisqually watershed. Instream flow levels and closures are set on the Nisqually River. The Mashel River is the only tributary of the Nisqually with instream flow levels and seasonal closures set in the rule. The other sub-basins in WRIA 11 are closed year-round.
- It is anticipated that growth will result in water supply shortfalls in the Cities of Yelm and Lacey and the Town of Eatonville in the next decade.
- In 1998, the Nisqually Indian Tribe initiated the Watershed Planning process. The initiating governments for the Nisqually watershed include the Nisqually Tribe, as the lead agency, and three counties, four cities/town, water districts and Ecology.
- Although the Planning Unit has chosen to address water quantity, instream flows, water quality and habitat, the watershed plan actions focus on water quantity and related instream flow issues.
- The Planning Unit adopted the watershed plan and instream flow recommendation in October 2003. Recommended actions have been formulated for the following high priority issues: growth and land use; ground water resources and supply, water rights in closed sub-watersheds; instream flow and surface/groundwater continuity, and water quality.
- The Planning Unit recommended existing closures should be maintained, unless new technical information suggests otherwise, or if a change in closure status would result in improved flow or habitat conditions. The Planning Unit also recommended that instream flow levels should be retained in the Nisqually River, but more work is needed on the Mashel River to improve/enhance the flow and address the water supply needs of the Town of Eatonville. (Eatonville depends on two ground water and one surface water sources in the Mashel River). Several species of salmonids are present in the Mashel River. Salmon habitat restoration plans are being developed for the recovery and protection of the species the River.
- Planning Unit made several recommendations to improve and/or augment flows when they are critically low. Recommended actions include but are not limited to: reuse/reclaimed water, artificial recharge, storage-related projects, groundwater regional water supply using deep aquifer before it empties into the Puget Sound, aggressive water conservation, relocation of wells, land use changes, and shoreline and critical areas protection.



<b>Actions: Achieve and Protect Instream Flows in the Nisqually (WRIA 11)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Assist Planning Unit with development of detailed strategies and Phase IV Implementation Plan, focusing on: <ul style="list-style-type: none"> <li>• Reuse and reclaimed water</li> <li>• Regional ground water supply using the Nisqually aquifer</li> <li>• Stormwater management</li> <li>• Conservation, and drought contingency plans</li> <li>• Water right transfers, water banking and other acquisition mechanisms</li> <li>• Options for mitigating impacts to existing instream flows, and</li> <li>• Implementation of long term monitoring programs</li> </ul> </li> <li>2. Provide funding and technical support for the Planning Unit work on the Mashel River (the only tributary to the Nisqually with instream flows set by rule). The objective is to assure that existing regulatory instream flows are protective of fish in the Mashel River Sub-basin. The instream flow work includes: <ul style="list-style-type: none"> <li>• Assessment of instream flow on the Mashel and its tributaries</li> <li>• Develop baseline habitat information</li> <li>• Determining the adequacy of existing stream flow gauging system</li> <li>• Characterize the hydraulic continuity in the Lower Mashel River</li> <li>• Developing a water budget</li> <li>• Develop recommendation on instream flow for the Mashel and its tributaries based on the assessment and analysis</li> </ul> </li> <li>3. In collaboration with the Planning Unit, determine whether new regulatory instream flows for the Mashel sub-basin need to be establishing by modifying the existing rule. The modified flow can be used as a flow restoration target.</li> <li>4. Begin rule making development, if decision is made to modify the existing flows, by filing 101, developing a rule development plan to outline the schedule for key documents and public involvement.</li> <li>5. Integrate the instream flow work and recommendations into the salmon habitat restoration plan for the Mashel sub-basin, developed under 2496 (Salmon Recovery Act of 1998)</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• A biologically defensible instream flow assessment and analysis is available</li> <li>• Instream flow regime that is more protective of fish in the Mashel River sub-basin is recommended</li> <li>• Existing regulatory flow on the Mashel is modified, if rule making is undertaken</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• November 2004, assessment is completed</li> <li>• December 2004 flow regime is developed in collaboration with Planning Unit and WDFW</li> </ul>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"> <li>• About \$90,000 will be spent on the assessment and analysis</li> <li>• X% of technical staff from Ecology and WDFW (biologists), watershed lead, and hydrogeologist. If rule is modified, X% of staff for rule development, SEPA, SBEIS, economic analysis, outreach, and public involvement</li> </ul>
<b>Responsible Entity</b>	Planning Unit, Ecology, and WDFW

## **5. Quilcene/Snow Watershed—WRIA 17**

### **Overview of the Watershed**

- Hood Canal summer run chum and the Puget Sound Chinook salmon were listed as threatened species under the federal ESA. No instream flows have been set by rule in this water-critical watershed.
- Surface and ground water uses are relatively high in the Big Quilcene, Little Quilcene, Chimacum, Lower Salmon and Snow Creeks, and Ludlow Creek. Major uses are for domestic and municipal purposes and agricultural irrigation.
- Population growth is projected to increase by 55% between 2000 and 2025. In some sub-basins, such as Ludlow, it is projected at 121%.
- The City of Port Townsend is voluntarily managing its diversions on the Big Quilcene by partially restricting its City's surface water diversions during low-flow periods.
- Watershed planning was initiated in 1998. Jefferson County is the Lead Agency. Other participating governments include: Clallam County, City of Port Townsend, PUD #1, Skokomish Tribe (has not participated in the process), Jamestown S'Klallam Tribe (pulled out of the process in October 2003), Port Gamble S'Klallam Tribe, Ecology, Port of Port Townsend, and the Jefferson conservation district. The Planning Unit also includes several organizations representing a wide range of water interests.
- The Planning Unit is focusing on water quantity, instream flows, water quality, and habitat.
- The Planning Unit approved the plan in November 2003, within its statutory deadline. The plan includes provisions for water quality protection and enhancement, water conservation and habitat protection and restoration.
- The Plan **did not include recommendations for instream flows.**
- The Planning Unit received grants for instream flow work. Data analysis needed to develop instream flow recommendations by October 2003 was not completed due in part to delay in field work, completion of WDFW wetted perimeter study and USGS ground water and surface water interactions study. In addition the Planning Unit identified the need to collect additional data on stream temperature relationship to summer low flows in three sub-basins.
- In collaboration with the Planning Unit, Ecology will move forward with data collection and analysis and will develop recommendations for instream flows after consultation with the Tribes and WDFW.

<b>Action: Set Instream Flows in the Quilcene/Snow (WRIA 17)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. File CR 101, and develop rule making schedule and plan</li> <li>2. Provide resources to complete pertinent studies and analysis (stream flow and temperature modeling).</li> <li>3. Contract with the Planning Unit to develop and implement instream flow rule outreach strategy</li> <li>4. Initiate consultation with the Tribes</li> <li>5. Develop preliminary and final initial biological recommendations sub-watershed by sub-watershed (7 of them). This will be done by biologists from Ecology, WDFW and the Tribes.</li> <li>6. Discuss the biologists' recommendations and identify control points and need for any additional stream gauges.</li> <li>7. Negotiate final instream flow recommendations in collaboration with the Planning Unit, WDFW, and the Tribes.</li> <li>8. File SEPA and CR 102 and develop Small Business Economic Impact Statement.</li> <li>9. Conduct public meetings and hearings</li> <li>10. File CR 103 and adopt rules with priority date of June 12, 2000</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Data and analysis reports on instream flow and related issues</li> <li>• Agreed-to instream flow regime adopted by rules</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• File CR 101 end of January 2004</li> <li>• Studies and analysis completed by October 2004</li> <li>• Initial biological recommendations begin in March 2004 for small streams and end by November 2004 for Chimacum Creek.</li> <li>• Negotiation and consultation (with Tribes) done by sub-watershed starting in March 2004 ending December 2004</li> <li>• File CR 102 and complete SBEIS by January 2005</li> <li>• Hold public meetings and hearings March 2005</li> <li>• File CR 103 and Adopt rules by June 05</li> </ul>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"> <li>• About \$45,000 for completing studies and analysis (flow/temperature modeling)</li> <li>• About \$38,000 for facilitating the negotiation and rule making process</li> <li>• X% of FTEs of specific staff --watershed lead, Ecology technical staff (biologist, hydrologist, economist and water quality), WDFW biologist, rule writer, and outreach staff</li> </ul>
<b>Responsible Entity</b>	Ecology with active participation of the watershed planning unit, and in consultation with WDFW and the Tribes

<b>Actions: Achieve and Protect Instream Flows in the Quilcene/Snow (WRIA 17)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Assist Planning Unit with development of detailed strategies for instream flows (part of phase IV), for example: <ul style="list-style-type: none"> <li>• Conservation, and drought contingency plans and implementation</li> <li>• Surface water and stormwater mgt plans</li> <li>• Critical aquifer recharge areas</li> <li>• Coordinate with 2496, salmon recovery groups, on restoration efforts with direct benefit to instream flows, e.g., wetlands restoration</li> </ul> </li> <li>2. Implement early actions to address summer low flows in Chimacum, Big and Little Quilcene and other streams by: <ul style="list-style-type: none"> <li>• Targeting Water Rights Acquisition Program to priority areas in the subbasins</li> <li>• Coordinating use of state and federal \$\$ for irrigation efficiency</li> <li>• Initiating discussions with the City of Port Townsend and the Paper Company on conservation and drought contingency and to pursue additional diversion reduction agreement for summer months</li> </ul> </li> <li>3. Investigate the extent and impacts of illegal/unauthorized water uses, and begin taking action against illegal uses</li> <li>4. Continue to maintain and operate the 8 newly installed gauges</li> <li>5. Develop and begin implementation of an instream flow monitoring and compliance program once the rules are adopted.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Detailed Phase IV implementation plan is approved by Ecology for funding</li> <li>• Early actions such as acquisitions, diversion reduction, and curtailment of illegal uses begin to restore flows in priority streams</li> <li>• Instream flow monitoring and compliance is in place by the time the instream flows are set by rules</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Acquisitions and diversion reduction implemented in summer 2004 and 2005</li> <li>• Instream flow monitoring and compliance begins June 2005</li> </ul>
<b>Staffing and Funding</b>	<ul style="list-style-type: none"> <li>• \$\$ for acquisitions</li> <li>• \$100,000 for developing detailed plan for Phase IV</li> <li>• \$\$ for additional gauges, if needed</li> <li>• X% of FTEs of specific staff e.g., watershed lead, technical staff (Ecology and/or WDFW), surface water monitoring and outreach staff</li> </ul>
<b>Responsible Entity</b>	Planning Unit, and Ecology in cooperation with WDFW

## **6. Elwha/Dungeness WRIA 18**

### **Overview of the watershed**

- The Dungeness River is one of the principal drainages in WRIA 18. There are seven anadromous salmonid species indigenous to the River (Chinook, coho, pink, chum, steelhead, cutthroat, and bull trout). The Elwha River historically was the most productive salmonid stream in the watershed. It produced a great diversity of stocks, including some of the largest Chinook in the state. Three stocks are currently listed as “threatened” under ESA—chinook, summer chum and bull trout. The other stocks are depressed or critical according to the Salmon and Steelhead Stock Inventory produced by WDFW and the co-manager tribes.
- This watershed is unique in that it has a west side stream with numerous gravity diversions for irrigated agriculture, similar to many streams in eastern Washington. Existing water rights exceed available surface flows in the mainstem during summer and fall months. Low flows adversely affect rearing and spawning habitat, as well as adult salmonid migration during summer and fall. It is one of the 16 water-critical basins.
- There is significant hydraulic continuity between the ground water and surface water in the basin. It is suspected that the 3500+ ground water rights may be resulting in significant surface water impacts.
- Extensive work has been going on in the watersheds since 1989. The work is a good example of collaboration and problem solving between the Sequim Dungeness Water Users Association (mostly irrigators), the Tribes, Counties, Departments of Ecology and Fish and Wildlife, Cities, and other entities.
- The Dungeness Quilcene Water Resources Management Plan contains important agreements negotiated between the water users and the Tribes on water conservation and flow restoration. A 1998 Trust Water Rights Memorandum of Understanding between the water users and Ecology institutionalized the agreement and set up a process to protect conserved water from relinquishment.
- Funding for improving irrigation infrastructure conveyance efficiency has been obtained by the Jamestown S’Klallam Tribe from federal and state sources, and by the Dungeness River Management Team.
- A split season water leasing program was implemented in 2001 (1000 acres were removed from production from August 1 to September 15) and 2003 (1400 acres were removed for the same period). Agreements are in place for the 2004 and 2005 irrigation season.
- Other major studies and actions include a comprehensive irrigation water conservation plan; a regional groundwater model; a pilot Comprehensive Irrigation District Management Plan; and extensive real-time stream flow gauging installed on all five irrigation outtakes.

- Key issues addressed include:
  - assessing the benefit of flow restoration to critical life stages of salmon;
  - assessing irrigation improvements and reductions in diversions that can be accomplished through infrastructure efficiencies;
  - assessing the potential for storage to offset late season irrigation demand;
  - evaluating impacts of hydraulic continuity with surface waters when setting instream flows; and
  - assessing potential for aquifer storage to offset effects of new water supply withdrawals on the Dungeness River.
- Instream flow recommendations were developed for the Dungeness and its tributaries. Discussions are still underway on instream flow needs/recommendations for the Tributaries of the Elwha River.
- Final vote by the Planning Unit on the plan and instream flow recommendations is scheduled for January 16, 2004.

<b>Action: Set instream flows and provisions for future water use in rules for the Elwha/Dungeness (WRIA 18)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. File CR-101 in winter 2004; develop rule-making plan.</li> <li>2. Initiate consultation and negotiation with Tribes on rule language; consult with other planning unit members.</li> <li>3. Define elements to be included in the rule: <ol style="list-style-type: none"> <li>a) Document the strategies and legal basis for: <ul style="list-style-type: none"> <li>• Ground water reserve</li> <li>• OCPI</li> <li>• Potential mitigation measures and sources of saved water</li> <li>• Management of well drilling</li> </ul> </li> <li>b) Resolve water supply, protection of instream flows and rule issues for Elwha tributaries and independent drainages.</li> <li>c) Evaluate seasonal closures in addition to instream flows, as recommended in plan.</li> <li>d) Establish control points.</li> </ol> </li> <li>4. Conduct public outreach on elements proposed for inclusion in rule.</li> <li>5. Draft rule language</li> <li>6. Prepare economic analysis, SBEIS, SEPA.</li> <li>7. File CR-102.</li> <li>8. Complete public process; adopt rule with water management elements and instream flows (priority date 2000).</li> </ol>
<b>Outcomes</b>	Adoption of rule including both regulatory instream flows and water management provisions
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Completed review and analysis of ground water model and legal issues by May 2004</li> <li>• Facilitated negotiation/consultation through July 2004</li> <li>• Published CR-102 by August 2004.</li> <li>• Adopted rules by February 2005.</li> </ul>
<b>Funding and staffing</b>	<ul style="list-style-type: none"> <li>• Hydrogeologist time on ground water model and reserve negotiations: 0.3 FTE</li> <li>• Policy review by WR program and AG</li> <li>• EAP and WR staff for technical support (control points, e.g.) 0.10 FTE</li> <li>• Staff resources for SBEIS, economic and SEPA analyses, rule development and coordination, outreach</li> <li>• Watershed lead – 75% FTE</li> </ul> <p>\$\$ for Facilitator – contract</p>
<b>Responsible Entity</b>	Consultation: Ecology, WDFW, Tribes, local governments. Rule: Ecology

<b>Actions: Achieve and Protect Instream Flow in Elwha/Dungeness (WRIA 18)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Develop strategies for mitigation of impacts to instream flows.</li> <li>2. Incorporate management and mitigation strategies into rules, ordinances and policies of governments and water purveyors.</li> <li>3. Incorporate into rule measures enabling management of exempt wells by local government.</li> <li>4. Track implementation of watershed plan elements related to exempt wells.</li> <li>5. Facilitate development and implementation of conservation programs by County, group A systems and other water users (e.g. outreach and education, technical assistance from DOH, assistance in grant writing, financial assistance)</li> <li>6. Work with the County and water right holders to implement the municipal water supply legislation and secure conservation benefits from existing rights.</li> <li>7. Continue water acquisition for late season instream flow improvement through lease or purchase.</li> <li>8. Secure funding for new storage projects.</li> <li>9. Fund on-going infrastructure improvements in the Dungeness irrigation system which result in water savings for the 1998 trust water rights program.</li> <li>10. Evaluate aquifer storage and recovery for potential as mitigation or a source of supply on the Dungeness.</li> <li>11. Amend the 1998 Trust Water Right MOU for consistency with current case law and to conform with operating agreements between Water Users and federal fisheries agencies. Assess feasibility of funding reuse of industrial water in Port Angeles.</li> <li>12. Develop a compliance and monitoring plan following rule adoption.</li> <li>13. Enforce against illegal diversions from high priority streams across the WRIA.</li> <li>14. Continue Ecology funding and management of real-time stream gauges in the WRIA.</li> <li>15. Provide technical or financial assistance for installation of water measurement devices.</li> <li>16. Continue collection of yearly data on water use under the irrigation rights.</li> <li>17. Revise sites for the monthly Dungeness well monitoring circuit based on recent studies and modeling; continue monthly well monitoring in concert with County.</li> <li>18. Develop well monitoring program for western WRIA 18. Share data between County and Ecology.</li> <li>19. Coordinate with North Olympic lead entity and 2496 efforts to integrate stream flow restoration measures into salmon recovery planning.</li> <li>20. Participate in County review process of Critical Areas Ordinances and stormwater policies.</li> <li>21. Participate in finalization of the Comprehensive Irrigation District Management Plan and support implementation of measures to meet target/restoration stream flows.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Understanding at local level that saved water is the source for new uses; incorporation of water conservation and management measures into local ordinance and policies</li> <li>• Funding for infrastructure improvements, management strategies and measures that provide water for fish and people, specifically for Dungeness storage, pipelining and ASR projects.</li> <li>• Agreement on “target flows” on the Dungeness</li> </ul>



	<ul style="list-style-type: none"> <li>• Regulation of exempt wells through County ordinance. New wells are minimized and drilled to deeper aquifers, thereby protecting both instream flows and water quality.</li> <li>• Amendment as necessary of the Trust Water Right MOU to reflect current law and to support Water User operating agreements with the federal fisheries agencies</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Develop storage project request for supplemental budget by mid December 2003.</li> <li>• Develop detailed implementation plan with planning unit by January 2005 to address: <ul style="list-style-type: none"> <li>- Conservation and efficiency programs</li> <li>- Implementation of the municipal water supply legislation</li> <li>- Mitigation measures and mechanisms for funding creative water management strategies</li> <li>- Management of exempt wells and well drilling</li> </ul> </li> <li>• Begin discussion of Trust Water Right MOU updates in winter 2004.</li> </ul>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"> <li>• Phase 4 funding for development of detailed implementation plans.</li> <li>• State funding of split-season water leases through 2005 (\$500K)</li> <li>• State funding of conveyance improvements on irrigation system through Irrigation Efficiencies Program and Referendum 38 grants and loans.</li> <li>• State \$ assistance for storage (\$3.3 million), infrastructure (\$1 million), ASR (feasibility study--\$250-400K) projects to benefit instream flows, agriculture and public water supplies.</li> <li>• Continued gauging program, EAP support.</li> <li>• Ecology staff resources for watershed lead, technical review of ground water issues and data; enforcement; water rights permit writing.</li> </ul>
<b>Responsible Entity</b>	Government members of the planning units, primarily the Water Users, Tribe and County, with Ecology

## **7. Upper and Lower Chehalis – WRIAs 22/23**

### **Overview of the Watershed**

- Historically, the Chehalis Basin has had strong runs of a number of salmonid species, but there has been a gradual decline of many of these runs over recent years, some attributed to insufficient stream flows and the degradation of fish habitat. The basin supports the ESA-listed (threatened) bull trout.
- Agricultural, urban and industrial development is concentrated in floodplain areas close to important basin streams and rivers. Population growth in those areas is projected to increase to 52% from 2000 to 2025.
- Instream flows were set hydrologically on 31 streams and rivers in 1976, and 23 streams and river reaches were closed to further surface water consumptive rights. At the center of the basin, instream flows are not met an average of 77 days a year, mostly from April to October, when water is most needed.
- Low summer instream flows have adverse water quality impacts in the form of elevated temperatures and low dissolved oxygen. During these times current out-of-stream needs are satisfied, but the best estimate is that there is not enough water to meet the needs of all existing water rights or allow new rights to be issued to meet the requests of all prospective users. This is particularly true in the upper Basin. On paper, the Chehalis Basin is significantly over appropriated.
- The Chehalis Basin Partnership (Partnership) was formally established in August 1998 to undertake watershed planning under Chapter 90.82 RCW. The Partnership includes representatives from four counties, the Chehalis Tribe, 12 cities, two water supply utilities, four state agencies, the Port of Centralia, major interests (including agriculture, business, environmental, fisheries and forestry), and citizens-at-large from four counties. (The Quinault Tribe has been participating but declined to become a member of the Partnership.) Grays Harbor County was designated as the lead entity. The County is also the lead for the 2496 process, established under the Salmon Recovery Act.
- The Partnership decided to take on three optional components of the Watershed Planning act: water quality, habitat, and instream flows.
- The plan and instream flow recommendation were approved on time in October 2003. The Partnership recommended that the current regulatory flows be retained for the time being.
- The Partnership would like to consider recommending flow levels for streams with no regulatory minimums or adding incremental flows to existing regulatory minimums, after further analysis is done by Ecology and WDFW. Studies done include: IFIM by Ecology and WDFW, an historical flow model by the Army Corps of Engineers, an Ecosystem Diagnostic and Treatment (EDT) study and data from flow monitoring.

<b>Actions: Modify existing regulatory flows, if needed; and Protect Instream Flows in the Chehalis (WRIAs 22 and 23)</b>	
<b>Key tasks planned</b>	<p><u>Complete the instream flow work--</u></p> <ol style="list-style-type: none"> <li>1. Finalize and publish the IFIM report—the report does not contain recommendations for flow regimes. The report covers six rivers/streams: Skookumchuck, Upper Chehalis, Satsop, Humptulips Black River, and West Fork Hoquiam.</li> <li>2. Develop recommendations for the six rivers/streams—(four recommendations were already developed): <ul style="list-style-type: none"> <li>• Maintain stream flow equipment installed on the Black and West Hoquiam Rivers to collect flows from October 2003 to May 2004</li> <li>• Develop hydrographs (10, 50, and 100% exceedance) for the two rivers</li> <li>• Develop recommendations using the IFIM results and the hydrographs</li> </ul> </li> <li>3. Contract out the rerun of the existing IFIM studies done in 1985 on six other rivers/streams, using new fish preference curves. Develop recommendations based on the result of the model rerun</li> <li>4. Compare and evaluate the new recommendations on 12 rivers/streams to the existing flow regimes for those set by rules in 1976 and the current hydrograph. Determine the adequacy of the existing regulatory flows</li> <li>5. Consult with the Tribes (Quinault and Chehalis) in developing recommendation and determining the adequacy of existing regulatory flows</li> <li>6. Actively engage the Chehalis Partnership in the development of recommendation and the determination of adequacy of existing regulatory flows</li> <li>7. Determine in collaboration with the Tribes and the Partnership whether existing rules should be modified to adopt new instream flow regimes for all or some of the 31 rivers/streams.</li> <li>8. Develop and implement a stream flow monitoring plan <ul style="list-style-type: none"> <li>• Install new gauges where needed based on the instream flow analysis</li> <li>• Coordinate with the US Corps of Engineers the installation of additional gauges and ensure the accessibility of the data through Ecology's Surface Water Monitoring System</li> </ul> </li> </ol> <p><u>Efforts toward protection of instream flows</u></p> <ol style="list-style-type: none"> <li>10. Prepare an adjudication scoping document focusing on state claims and certificates. The report will outline the number and location of claims and certificates, the amount claimed by purpose and location, the justification and process for conducting a general adjudication and the cost and timeline. The report will be shared and discussed with the Partnership and the Tribes. <b>There is no commitment at this time to initiate a general adjudication in the Chehalis.</b></li> <li>11. Work with members of the Partnership to identify areas where use of exempt wells detrimentally impact existing instream flows and develop options for dealing with use of exempt wells in those problem areas.</li> </ol>
<b>Outcomes</b>	<ol style="list-style-type: none"> <li>1. Up-to-date report on the biological and hydrological needs of instream flow is readily available</li> <li>2. Recommendations for instream flows for all 12 rivers/streams are completed, and adequacy of the existing regulatory flows is determined and documented</li> <li>3. In consultation with the Tribes and the Partnership, a determination is made on</li> </ol>

	<p>whether to modify the regulatory flow and/or to design target flows for the purpose of achieving instream flows especially during summer low flows.</p> <ol style="list-style-type: none"> <li>4. An adjudication scoping document is available for discussion and possible incorporation in Phase IV implementation plan</li> <li>5. Options to address exempt wells are developed for problem areas and where they can detrimentally affect instream flows and impair the state and locals ability to restore flows</li> </ol>
<b>Timeline</b>	<ol style="list-style-type: none"> <li>1. Nov/Dec. 2004 final recommendations and determination of adequacy of existing flows for the first six rivers/streams</li> <li>2. By early 2005 final recommendations and determination of adequacy of existing flows for the next six rivers/streams</li> <li>3. Spring 2005 decision is made on whether to modify existing regulatory flows</li> <li>4. By Fall 2004, the adjudication scoping document and the exempt wells options are prepared</li> </ol>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"> <li>• \$\$ to install and maintain additional gauges (leverage these \$\$ with USCE \$\$ for additional gauges)</li> <li>• \$\$ to rerun the 1985 IFIM studies</li> <li>• X% of watershed lead, hydrogeologist, surface water monitoring staff, Ecology and WDFW biologist, adjudication staff and other technical staff will be needed</li> </ul>
<b>Responsible Entity</b>	Ecology in cooperation with WDFW, Tribes, and the Chehalis Partnership

## **8. Lower Columbia:**

### **Grays/Elochoman/Cowlitz WRIAs 25/26 and Lewis/Salmon/Washougal WRIAs 27/ 28**

#### **Overview of the watersheds**

- Grays/Elochoman/Cowlitz WRIAs 25/26 are facing few significant or widespread water supply issues; have a relative abundance of water for municipal, industrial and residential uses and low projected population growth in the next 20 years.
- Lewis/Salmon/Washougal WRIAs 27/ 28 have a larger population base; Clark County is one of the fastest growing areas of the state.
- Lead Agency for all 4 watersheds is the 1998 legislatively formed Lower Columbia Fish Recovery Board (LCFRB). It is also the Lead Entity for salmon recovery planning. The primary mission of the LCFRB is recovery of salmonids to healthy, harvestable levels; emphasis is on maintaining or increasing existing stream flows.
- There are no adopted instream flow rules. The Lower Columbia Fish Recovery Board (LCFRB) has opted to conduct instream flow assessment, and was awarded instream flow supplemental grants in 2003. The Lower Columbia Fish Recovery Board has completed a comparative analysis of stream hydrology, flow modeling and toe-width study results. They are currently undertaking a detailed assessment of existing closures: physical location, extent and mapping.
- Ecology and WDFW have conducted fish habitat studies using IFIM and toe width for the East Fork Lewis, Kalama and Washougal Rivers and tributaries.
- The Board's plan and instream flow recommendations are due in summer 2004. At this time, the LCFRB is discussing the possibility of not recommending regulatory flow regime. They are looking at recommending closure either by rule or administrative for the entire sub-basins or reaches. Use of "administrative closures" (not done by rules but on a case by case based on a determination of unavailability of water for further withdrawals) has been widespread in the Lower Columbia since the 1940s.
- The Lower Columbia Fish Recovery Board is also completing recovery scenarios for fish, which are expected to be done by the end of 2003. The Board will also develop a preferred scenario which will indicate the level to which populations are to be recovered in the region. The Lower Columbia Fish Recovery Board will then analyze the two together to identify where existing, new or modified closures make the most sense to achieve fish recovery under the preferred scenario.
- The LCFRB is looking at alternative sources of supply to meet growth demands: deep aquifers, regional or municipal water supplies and avoidance of further issuance of surface water rights resulting in no net loss to stream flow; and it is developing strategies to enhance and augment existing flows.

- The action specifics to the Lower Columbia for setting, achieving and protecting instream flows will be developed in collaboration with the LCSRB, prior to the deadline for the plan and instream flow recommendations.

## **9. Walla Walla Watershed –WRIA 32**

### **Overview of the Watershed**

- The Walla Walla watershed is comprised of all of Walla Walla County and just over half of Columbia County. The Touchet River originates in western Columbia County. The headwaters of the Walla Walla River and portions of its Mill Creek tributary are in Oregon. Seventy-three percent of the watershed (817,923 acres) is in Washington State.
- The population in Walla Walla County is 55,180 and in Columbia County 4,064. Approximately 77% of the population is located in incorporated areas including Walla Walla, College Place, Dayton, and Waitsburg. The population is projected to increase by approximately 24% from 2000 to 2020 (55% from 2000 to 2042).
- Bull Trout and Steelhead are listed as threatened species under the federal ESA. An agreement between three irrigation districts and the United States Fish and Wildlife Service was first reached in 2000 and has subsequently been re-negotiated annually. This agreement leaves water in the mainstem Walla Walla.
- There is an existing in-stream flow rule: WAC 173-532. The basin is closed to appropriation during the summer irrigation season.
- The basin is a water-critical basin, fully adjudicated and all available summer water has been allocated.
- Watershed planning was initiated in 2000. Walla Walla County is the Lead Agency. Other participating governments include: Columbia County, Cities of Walla Walla and Waitsburg, the Walla Walla County Conservation District and Gardena Farms Irrigation District. The remaining planning unit membership is drawn from the agricultural community, the environmental community, and municipal residents. The Confederated Tribes of the Umatilla Indian Reservation with usual and accustomed rights granted by an 1855 treaty is an invited member of the planning unit, as is the City of College Place. WDFW and Ecology participate on the planning unit in an advisory (non-voting) capacity.
- Estimates of water usage in the basin will improve over time as meters are now being installed by the top 80% of the water users. The best estimates currently available list the agricultural water use at 92,500 acre-feet per year (afy); approximately 50% of this demand is met by surface water. Residential, commercial, and industrial water use is estimated at 15,572 afy from surface water. The projected out-of-stream water demand in 2042 70,128 afy.
- An Instream Flow Incremental Methodology study (IFIM) and subsequent modeling by PHABSIM was done by Ecology and WDFW and published in 2003.

- The planning unit received grants for instream flow work and additional IFIM and PHABSIM studies and modeling has been done by Mike Barber's group at WSU.
- Feasibility studies for surface aquifer recharge and conventional storage are being conducted in the hope of providing flow augmentation in the future.
- The planning unit would like to proceed with negotiated rule making during plan development. (The plan is due in Summer 2005.) The planning unit has approved a strategy for improving instream flows and managing water in WRIA 32. There is sufficient data at several management points to aid in setting instream flows.



<b>Action: Set instream flows and provisions for future water use in rules for the Walla Walla (WRIA 32)</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. File CR-101 in winter 2004; develop rule-making plan.</li> <li>2. Initiate consultation and negotiation with Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and WDFW on rule language; consult with planning unit and Federal Services engaged in ESA compliance.</li> <li>3. Define elements to be included in the rule: <ol style="list-style-type: none"> <li>a) Document the strategies and legal basis for: <ul style="list-style-type: none"> <li>• Aquifer storage and recovery by the city of Walla Walla</li> <li>• Surface aquifer recharge</li> <li>• Potential mitigation measures and sources of saved water</li> <li>• Management of existing water rights</li> </ul> </li> <li>b) Resolve water supply, protection of instream flows and rule issues for Walla Walla River tributaries in Washington State.</li> <li>c) Evaluate continuing seasonal closures in addition to instream flows.</li> <li>d) Confirm recommended management points.</li> </ol> </li> <li>4. Conduct public outreach on elements proposed for inclusion in rule.</li> <li>5. Draft rule language</li> <li>6. Prepare economic analysis, SBEIS, SEPA.</li> <li>7. File CR-102.</li> <li>8. Complete public process; adopt rule with water management elements and instream flows (priority date 2000).</li> </ol>
<b>Outcomes</b>	Adoption of rule including both regulatory instream flows and water management provisions
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Facilitated negotiation/consultation through October 2004</li> <li>• Published CR-102 by December 2004.</li> <li>• Adopted rules by May 2005.</li> </ul>
<b>Funding and staffing</b>	<ul style="list-style-type: none"> <li>• Hydrogeologist time on surface aquifer recharge – 0.2 FTE</li> <li>1. Hydrogeologist time on surface/ground water continuity – 0.2 FTE</li> <li>• Continuing support from Ecology's Surface Water Monitoring section for gauging installations and with assistance from water resources staff for technical support (control points, e.g.) 0.20 FTE</li> <li>• Policy review by Water Resources Program and the Attorney General staff</li> <li>• Staff resources for SBEIS, economic and SEPA analyses, rule development and coordination, outreach</li> </ul>

	<ul style="list-style-type: none"><li>• Watershed lead – 20% FTE</li><li>• \$\$ for Facilitator – contract</li></ul>
<b>Responsible Entity</b>	Consultation: Ecology, WDFW, CTUIR, local governments Rule development: Ecology

<b>Actions: Achieve and Protect Instream Flow in Walla Walla WRIA 32</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Develop strategies for mitigation of impacts to instream flows.</li> <li>2. Incorporate management and mitigation strategies into rules, ordinances and policies of governments and water purveyors.</li> <li>3. Facilitate development and implementation of conservation programs by County, group A systems and other water users (e.g. outreach and education, technical assistance from DOH, assistance in grant writing, financial assistance)</li> <li>4. Continue water acquisition for late season instream flow improvement through lease or purchase.</li> <li>5. Develop strategies to protect water supplied for fish protection in Oregon from out-of-stream uses in Washington.</li> <li>6. Secure funding for new surface aquifer recharge and storage projects.</li> <li>7. Support and fund where possible on-going infrastructure improvements in irrigation systems that result in water savings transfer to the Trust Water Right Program.</li> <li>8. Evaluate expanding aquifer storage and recovery for potential as mitigation or a source of supply on Mill Creek.</li> <li>9. Develop compliance and monitoring plan following rule adoption, building on work done to date.</li> <li>10. Enforce against illegal diversions from high priority reaches across the Water Resource Inventory Area.</li> <li>11. Continue Ecology funding and management of real-time stream gauges in the WRIA.</li> <li>12. Continue to provide technical and financial assistance for installation of water measurement devices.</li> <li>13. Continue collection of yearly data on water use.</li> <li>14. Develop well monitoring program for WRIA 32. Share data between County and Ecology.</li> <li>15. Continue participation in Northwest Power and Conservation Council (NPCC) sub-basin planning process and document review.</li> <li>16. Coordinate with the Snake River Salmon Recovery Board to integrate stream flow restoration measures into salmon recovery planning.</li> <li>17. Participate in County review process of Critical Areas Ordinances.</li> <li>18. Participate in finalization of the Comprehensive Irrigation District Management Plan and support implementation of measures to meet target/restoration stream flows.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Understanding at local level that saved water benefits fish and provides ESA compliance.</li> <li>• Incorporation of water conservation and management measures into local ordinance and policies</li> <li>• Funding for infrastructure improvements, management strategies and measures that provide water for fish and people, specifically for shallow aquifer recharge, storage, pipelining and ASR projects.</li> <li>• Agreement on “target flows” on key management points in the Walla Walla Basin</li> </ul>

<b>Timeline</b>	Develop final watershed plan with planning unit by January 2005 to address: <ul style="list-style-type: none"><li>• Individual implementation area recommendations</li><li>• Conservation and efficiency programs</li><li>• Implementation of the municipal water supply legislation</li><li>• Mechanisms for funding water management strategies</li></ul>
<b>Staffing &amp; Funding</b>	<ul style="list-style-type: none"><li>• State funding of conveyance improvements on irrigation systems through Irrigation Efficiencies Program and Referendum 38 grants and loans.</li><li>• State \$ assistance for storage, infrastructure projects, shallow aquifer recharge and for other projects to benefit instream flows, agriculture and public water supplies</li><li>• Continued gauging program, and support from the Surface water monitoring section at Ecology.</li><li>• Ecology staff resources for watershed lead, water right acquisitions and transfer of acquired water including conserved water to the Trust Water Right Program, technical review of shallow aquifer recharge issues and data; enforcement; water rights permit writing.</li></ul>
<b>Responsible Entity</b>	Government members of the planning units, primary water users, WDFW, CTUIR, interested and active environmental and non-profit organizations, Columbia and Walla Walla Counties and Ecology.

## **10. Yakima/Naches WRIAs 37, 38, and 39**

### **Overview of the watershed**

- The Yakima Basin was historically one of the primary anadromous salmonid production areas within the Columbia River Basin. The Yakima Basin currently supports spring chinook, fall chinook, coho, summer steelhead, bull trout, other resident salmonids and other non-salmonid fish species.
- Habitat in the basin has been impaired to varying extents, depending on species.
- A primary factor influencing salmonid habitat quantity and quality is instream flow. The natural flow regime of the Yakima River and several of the tributaries has been altered, primarily related to the storage and delivery of water for irrigation.
- A large component of the salmonid restoration work to date has been involved with attempting to manage/restore instream flows in a manner that is more representative of the unregulated natural flow regime in the watershed.
- Also, significant recent progress has been made in reducing turbidity and associated presence of toxics in irrigation return flows.
- The Tri-County Water Resource Agency serves as the lead agency and represents the initiating governments (counties, cities and irrigation districts) for the watershed planning process.
- The 2514 process builds on a variety of previous and on-going planning activities, such as the Yakima River Watershed Council, Yakima Valley Conference of Governments, Yakima River Basin Conservation Advisory Group, and work by counties, cities, US Bureau of Reclamation, US Geological Service, Ecology, Yakama Nation and many other organizations.
- The planning unit focused on water quantity, water quality and habitat. The Tri-County Agency chose not to include setting instream flows by rule based on two factors: first, target flows are already established for the mainstem under the federal Yakima enhancement program; and second the watershed plan is focusing on the mainstem river system not the tributaries. In addition treaty right instream flows in the Yakima River Basin was affirmed by the court. The flow levels are negotiated annually by the USBR in consultation with a group of fisheries biologists based on the particular year biological needs of fisheries.
- The Planning Unit adopted the watershed plan in December 2002, ahead of its deadline of 2003.

<b>Actions: Achieve and Protect Instream Flows in the Yakima/Naches WRIAs 37/38/39</b>	
<b>Key tasks planned</b>	<ol style="list-style-type: none"> <li>1. Complete the adjudications of all existing surface water rights</li> <li>2. Complete USGS, USBR and Yakama Indian Nation study of surface and ground water hydraulic continuity</li> <li>3. Continue until 2006 the moratorium or hold on new ground water permits started in 1999</li> <li>4. Continue to support the Black Rock Reservoir study</li> <li>5. Continue the metering and reporting of water use through the USBR and RCW 90.03.360</li> <li>6. Continue the acquisition of existing water rights and their transfer to the trust water right program for instream flow purposes, under RCW 90.38 and 90.42</li> <li>7. Create pilot water bank in Yakima valley, building on the work done in 2003</li> <li>8. Continue to partner with the USBR to implement element of the Yakima Enhancement Program</li> <li>9. Support the Conservation Districts and Conservation Commission implementation of the Irrigation Efficiencies Grant Program, including the transfer of net water saving into the Trust Water Right Program for instream flows</li> <li>10. Support the funding and implementation of the Sunnyside Division Water Right Settlement</li> <li>11. Establish a Yakima basin watermaster's office with the USBR</li> <li>12. Continue to support stream flow monitoring in basins targeted for acquisition and irrigation efficiency improvements</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• All surface water rights in the Yakima basin are quantified and their priority date confirmed—this is a culmination of 27 plus years of work by state, federal, tribal and local governments, irrigation districts, and all other water users in the valley.</li> <li>• Progress continue on instream flow restoration in critical reaches in the Basin</li> <li>• A comprehensive monitoring and compliance program is in place at the end of the adjudication process</li> </ul>
<b>Timeline</b>	Adjudication completed by June 30, 2005
<b>Staffing &amp; Funding</b>	<p>\$\$ for Acquisition from state, USBR and BPA (through the National fish and Wildlife Foundation (NFWF))</p> <p>\$\$ for the Black Rock Reservoir study</p> <p>Adjudication staff</p> <p>Regional and headquarter staff for: acquisition, water banking, permitting, technical support, watershed lead, contracts negotiation and overall outreach and coordination</p> <p>WDFW staff to support water right acquisition and irrigation efficiencies</p>
<b>Responsible Entity</b>	Ecology in collaboration with WDFW, USBR, Yakama Nation, Irrigation Districts, Conservation Commission/Conservation Districts, and other entities (e.g., Washington Water Trust)

## **11. Entiat WRIA 46**

### **Overview of the Watershed**

- The Entiat River watershed is located in Chelan County. Approximately 84% of the drainage area is in public ownership, primarily National Forest. The Entiat watershed includes several perennial and intermittent tributaries. Some are known to experience interrupted flows at their confluence with the Entiat River during drought years.
- A lack of over-wintering juvenile rearing habitat is most limiting to the ability of the habitat in the Entiat watershed to fully sustain salmon population (Chinook, steelhead and bull trout). Unscreened and inadequately screened surface water diversions and improperly designed water diversions and dams pose a direct threat to salmon.
- The Entiat River is typical of streams on the east slopes of the Cascade Mountains—high flows in the spring and early summer, then very low flows during late summer to early spring.
- Snowmelt is the predominant source of streamflow and groundwater in the Entiat system. There is a strong connection between the groundwater system and the Entiat River.
- Ecology and WDFW conducted an instream flow study in the Entiat using IFIM, producing a draft report in 1995.
- Water withdrawals, both for agriculture and domestic, has been identified as an issue of concern—exacerbate normal low flows of late summer in the Entiat River.
- Entiat River WRIA Planning Unit (EWPU) was “established” on April 22, 1999 as the Entity responsible for instream flow recommendations and Water Resource Management Program development.
- The initiating governments chose to include all four elements: water quantity, water quality, habitat and instream flow.
- The Entiat Watershed Planning Unit and Ecology sponsored an instream flow conference in March 2000, in Wenatchee, WA.
- Negotiations in April 2000, by the Planning Unit members enabled the adoption of IFIM as method for developing recommendations for regulatory instream flow and addressing multiple objectives of flows. The adoption of IFIM by Planning Unit and the joint scoping of instream flows and water resources issues illustrate commitment by the Planning Unit to collaborative effort addressing instream flows and water resource management.
- The results of the IFIM Instream flow study conducted by Ecology and WDFW were discussed and revised in October, 2003.

- EWPU negotiated “regulatory” instream flows from February 20, 2003 to October 2, 2003.
- Final recommendations for instream flows are due in the spring of 2004. The Planning unit is also developing a target flow, referred to as “Planning Unit Flow”, recommendations for inclusion in the draft watershed plan.



<b>Action: Set Regulatory Flows in the Entiat River WRIA 46 and Adopt a Water Resource Management Program under Chapter 173-500 WAC.</b>	
<b>Key tasks</b>	<ol style="list-style-type: none"> <li>1. Review and accept “Regulatory” recommendation for instream flow and water management provisions approved by Planning Unit for inclusion in draft Watershed Plan</li> <li>2. Complete Rule Development Plan and SEPA Process</li> <li>3. Initiate rulemaking process by issuing CR 101, once the watershed action, including instream flow recommendations is approved by the Planning Unit</li> <li>4. Prepare the Small Business Economic Impact statement (SBEIS)</li> <li>5. Once Watershed Plan is Approved by Chelan County, draft rule language to Code Reviser and issue CR 102</li> <li>6. Negotiate additional rule details, and develop Concise Summary Report, and Comment Response</li> <li>7. Finish Rulemaking Process, Issue CR-103, Establishing Water Resource Management Program and “Regulatory” (minimum/base) Instream Flows</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Draft water management provisions and instream flow recommendations are agreed to for adoption into rules</li> </ul> <ol style="list-style-type: none"> <li>1. Approval of Plan by EWPU commits community, County and Ecology to implementation</li> <li>2. Rulemaking procedure/SEPA/SBEIS provide additional information to the application of the public interest test</li> <li>3. “Regulatory” flows and Water Resource Program adopted by rules will govern future water use decision-making</li> </ol>
<b>Timeline</b>	<ol style="list-style-type: none"> <li>1. EWPU approves “Administrative” flow recommendation for inclusion in review draft Watershed Plan, January 2004</li> <li>2. Ecology completes Rule Development Plan, January, 2004</li> <li>3. EWPU approves final Watershed Plan – May, 2004</li> <li>4. Rulemaking process initiated, issue CR-101 – May, 2004</li> <li>5. Begin SBEIS in June, 2004, end October, 2004</li> <li>6. Watershed Plan Approved by Chelan County before end of September, 2004</li> <li>7. Negotiation and consultation on the rule language through October, 2004</li> <li>8. Draft Rule language to Code Reviser, November 1, 2004</li> <li>9. Issue CR-102 by November 30, 2004.</li> <li>10. Develop Concise Summary Report, Comment Response March, 2005</li> <li>11. Adopt rules by May, 2005</li> </ol>
<b>Staffing and Funding</b>	<ul style="list-style-type: none"> <li>• \$\$ for facilitating the negotiation and rule making process</li> <li>• Average of 0.25 of FTEs for each of the following staff persons time: Water Resources Section Manager, watershed lead, water resources technical staff, rule writer, public meeting coordinator, and outreach staff (total 1.5 FTE)</li> </ul>
<b>Responsible Entity</b>	The Entiat Watershed Planning Unit, Ecology, Tribes and WDFW. The adoption of the recommendations in rules is Ecology’s responsibility, with support of the EWPU

<b>Actions: Achieve and Protect Instream Flows in the Entiat WRIA 46</b>	
<b>Key tasks</b>	<ol style="list-style-type: none"> <li>1. EWPU approves “Planning Unit” flow recommendations for inclusion in draft Watershed Plan, by January, 2004</li> <li>2. Establish and implement a “Planning Unit Flows” to meet stream ecology and salmon recovery objectives.</li> <li>3. If determined that voluntary “Planning Unit Flows” should be codified it will be done in conjunction with adoption of the regulatory flow and water resources program.</li> <li>4. EWPU and Ecology facilitate the implementation of voluntary water conservation actions, and voluntary water transfer programs</li> <li>5. EWPU studies aquifer recharge, and surface/ground water storage options, recommends any appropriate aquifer recharge and/or storage projects following analyses, and develops grants and implements any appropriate aquifer recharge and/or storage projects.</li> <li>6. Ecology continues to maintain and operate 16 new gages, and 3 USGS gages in watershed.</li> <li>7. Supplement gauging equipment with Experimental forest equipment (e.g. meteorological equipment).</li> <li>8. Ecology to compare stream flow gage information with “Planning Unit Flows” to assist the Planning Unit with prioritization of projects intended to help achieve instream flows.</li> <li>9. Ecology and WDFW conduct field surveys of points of withdrawal and diversion to determine current water use points. Share information with Planning Unit and evaluate the potential of unauthorized diversions. EWPU to work with potential illegal water users seeking voluntary compliance. IF EWPU is ineffective, it will refer to Ecology for further action.</li> </ol>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Effective Strategies to provide sufficient water for instream and out of stream are developed and financial support to implement is sought</li> <li>• Water Conservation, habitat improvement, water transfer, and trust water actions focused on priority areas.</li> <li>4. Instream flow monitoring and compliance program is in place to protect the regulatory instream flows and to monitor the frequency of “Planning Unit Flows” achievability</li> <li>• Compliance strategy is in place and actions are taken against potential illegal water uses.</li> </ul>
<b>Timeline</b>	<ol style="list-style-type: none"> <li>1. EWPU approves “Planning Unit” flow recommendations by October 2004</li> <li>2. If determined that voluntary “Planning Unit Flows” should be codified the flows will be adopt in same rule as regulatory flows by May, 2005.</li> <li>3. Detailed implementation strategies are developed to increase water use efficiency, use transfer of water and trust water program, implement aquifer or surface water storage projects to meet in stream and out-of-stream water needs</li> <li>4. Monitoring and compliance program is in place by June 2005</li> </ol>

<b>Staffing and Funding</b>	<ul style="list-style-type: none"><li>• Phase 4 \$\$ to continue watershed effort</li><li>• \$\$ for to Lead Agency (CCCD) to Administer Voluntary Water Transfer Program</li><li>• X% of FTEs of specific staff e.g., watershed lead, technical staff (Ecology and/or WDFW), outreach staff, and surface water monitoring staff</li></ul>
<b>Responsible agency, and program</b>	<p>The primary responsibilities for developing and implementing strategies to achieve flows reside with the Planning Unit with Ecology's assistance. The responsibilities for implementation are identified in the watershed plan. The responsibility for rule making, monitoring, and certain flow restoration actions will be Ecology's in cooperation with the Planning Unit, and WDFW.</p>

## **APPENDICES**

### **APPENDIX A**

#### **WRIAs not included in this Action Plan that meet one or more of the selection criteria:**

Ecology, WDFW and other agencies will continue to work with and support the watershed planning and stream flow efforts on setting, achieving and protecting being done in these WRIAs, through the 2514 and other processes.

- **San Juan** (WRIA 2): non-critical basin where flows are not limiting factors to salmon recovery.
- **Snohomish** (WRIA 7), **Cedar-Sammamish** (WRIA 8), **Duwamish-Green** (WRIA 9), and **Puyallup-White** (WRIA 10): working under the Central Puget Sound Initiative. (water-critical basins)
- **Chambers-Clover** (WRIA 12): water-critical basin closed to any further appropriation. The Planning Unit did not opt to address existing flows and closures set by rules.
- **Deschutes** (WRIA 13): non-critical basin with existing instream flows and closures. The Planning Unit, while it opted to modify existing instream flows, its technical review group recommended against any changes. The focus of Ecology efforts, according to the Planning Unit, should be on fully implementing the regulatory instream flow rules for WRIA 13 adopted in 1980.
- **Palouse** (WRIA 34): non-critical basin with non-ESA salmonids listed species. Instream flow recommendations due in 2007.
- **Upper Crab/Wilson (WRIA43)**: non-critical basin with non-ESA salmonids listed species. Instream flow recommendations due in 2006.
- **Methow** (WRIA 48): water critical basin with existing instream flows. The Planning Unit did not opt to address existing flows and closures set by rules.
- **Little/Middle Spokane** (WRIAs 55/57): non-critical basins. Only WRIA 55 has existing instream flows. There are no ESA salmonids listed species.
- **Hangman** (WRIA 56) and **Moses Coulee/Foster Creek** (WRIAs 44 and 50): non-critical basins with recommendations and plans due in 2004.
- **Colville** (WRIA 59): non-critical basin with existing instream flows.
- **Pend Oreille** (WRIA 62): Planning Unit did not opt to address flows (plan due in 2004).

## **APPENDIX B for PART THREE**

### **TOOLS AND ACTIONS FOR ACHIEVING AND PROTECTING REGULATORY FLOWS**

An important part of designing actions for achieving and protecting flows for individual watersheds was to first compile a list of the potential tools and actions available. The list that follows is not exhaustive or exclusive, rather it is intended to highlight actions that are under state authority and responsibility. It includes both incentives and regulatory actions.

While some of the actions can be taken independently of local actions, they are more effective if they are coordinated and, where appropriate, integrated with local and federal actions. Most of the tools and actions are consistent and supportive of local watershed plans and of future implementation plans. Where possible, actions and tools reference existing programs, policies and white papers.

This list of tools and actions is included for its applicability to the current Action Plan, but it will also be a useful reference for 2514 groups during Phase 4 Implementation, as well other watershed planning actions in the future.

#### **Flow restoration options**

##### **1. Water Right Acquisition Tools**

Under the trust water law, Ecology can acquire water rights through purchases, leases, donations and other appropriate means, including water conservation projects. Once acquired, these rights become trust water rights which retain the priority date of the original water rights and are not subject to relinquishment due to lack of use. Water right acquisitions are particularly well-suited for small stream and tributaries, where even adding small amounts at the right time and reach can be critical. (See Washington Water Acquisition Program “Finding Water to Restore Streams,” March 2003.)

Washington has a number of tools for water acquisition. Determining which acquisition tool is best depends on a wide array of factors, including the extent and duration of stream flow problems, acceptance by water-right holders and communities of instream flow needs and available funding. The mechanisms that appear most promising are:

- *Purchases.* Purchasing all or a portion of a water right means that right is permanently transferred into the state’s trust water rights program. A purchase offers a permanent solution to flow needs in streams with chronic flow problems. This is the most expensive means of acquiring water rights. Due to limited funding, a water right considered for purchase needs to be located in high priority area and have an early enough priority date so the water can be protected from withdrawals by other water users.

- *Leases.* Leasing offers the opportunity for water-right holders and local communities to become comfortable with stream flow restoration efforts. For example, **annual leases** can be targeted to solve short-term flow problems, such as extreme low-flow conditions during drought. A **split-season lease** allows a portion of a water right to be used for irrigation early in the season, leaving the remaining portion of the right for instream use later in the summer or fall. Split-season leases allow farming to continue while supporting salmon. Another type, the **dry-year lease**, is triggered only when water is needed for particular circumstances, rather than providing for continuous use.
- *Water Banks.* A water bank program to restore stream flows in Washington can be done using the existing state trust water right program. Trust water rights acquired by purchase, lease or donation can be “banked,” meaning held by the state for future withdrawal or exchange. Banked water can be held in storage, a reservoir system or an underground aquifer. Such water is a trust water right that can be exercised for stream flows when and where needed.
- *Gift or Donation.* A person or entity can donate all or part of a valid and beneficially used water right to the Trust Water Rights Program. A donation may qualify for a federal income tax deduction.
- *Conservation and Water Use Efficiency.* Trust water rights can redirect the use of conserved water saved through state or federally funded conservation, including irrigation improvement efficiencies. The conserved water or “net water savings” can be a significant amount of water instream to benefit fish within a specific stream reach or reaches.

## 2. Water Storage

One proposed solution for low stream flows is to store water when there is excess run-off and deliver or release it during low-flow periods when it is needed for fish. Releasing stored water from existing and new storage can be done voluntarily or as a mitigation condition for a new or modified project. For example, the FERC re-licensing process often requires that flows are restored in the reach of the stream affected by the operation of the hydropower facility. Because of the complex economic, technical and environmental issues surrounding new storage projects, the feasibility of each project and its potential benefits and impacts can only be determined on a project-by-project basis.

## 3. Aquifer Recharge

Artificial recharge is a process of putting water into an aquifer system at a rate greater than what would occur naturally. In general, the purpose is to take excess seasonal run-off and put it into aquifers for later use. The stored water can be withdrawn via wells or, if confirmed by study results, it could naturally discharge back into the stream in time to augment low summer flows. There are several technical and legal concerns regarding the use of aquifer recharge projects for flow augmentation or as a mitigation tool.

#### 4. Reuse and Reclaimed Water

The use of reclaimed water is a promising strategy for reducing the current or future direct draw on streams and associated aquifers. Under modern water treatment technologies and standards, sewage and industrial wastes are now sufficiently cleaned to be recycled and used rather than just discharged. Reclaimed water can be used to augment stream flows where and when needed.

#### 5. Regulating Illegal and Excessive Use of Water

Some areas of the state have a significant amount of water being used

- without authorization from Ecology,
- in excess of the quantities allowed under a water right,
- in excess of the acreage allowed to be irrigated, and/or
- outside the authorized place of use.

Based on Ecology's investigations, these forms of illegal activity occur in varying degrees in most areas of the state. In some areas, shutting down or curtailing illegal and unauthorized diversions/withdrawals can restore a significant amount of water to the affected stream.

#### 6. Voluntary or Regulatory Negotiated Agreements

Flows can be enhanced and restored as a result of a:

- water rights settlement agreement (e.g. Sunnyside Division Water Rights Settlement);
- diversion reduction agreement (e.g. Dungeness Trust Water Right Agreement);
- habitat conservation plan (e.g. Seattle HCP);
- mitigation agreement (e.g. Lake Tapps);
- agreement between Ecology and a water right holder to limit water use to protect given flow levels during extreme low flows and/or drought condition; and/or
- other types of voluntary or regulatory negotiated agreements.

#### 7. Source of Water Substitution

This type of acquisition involves changing the point of a surface water diversion or substituting one source of water for another, usually from surface to ground water. Changing the point of diversion to a location below a critical stream reach might increase flows in that reach. Where ground and surface waters are hydrologically connected, changing the point of diversion from surface water to wells can result in more water remaining in the stream. A diversion source may also be changed from an existing surface diversion on a small tributary to a larger mainstem river or stream.

### **Flow protection options**

#### 1. Action to Prevent Further Decline in Stream Flows

For streams without regulatory instream flows, or where regulatory flows are inadequate, Ecology has two options for preventing further degradation, until such time that flows are adopted or revised. First, Ecology can withhold issuance of water rights for surface water or ground water in continuity with low flow rivers/streams. Another option is to impose conditions on water rights on a case-by-case basis, using WDFW recommendations.

After a regulatory flow is established, Ecology will condition, as appropriate, all subsequently issued water right permits and certificates with provisions requiring that the use be ceased as long as the specified regulatory flow is not being satisfied. Water right changes are prohibited from impairing any existing water rights (including adopted stream flows).

2. Monitoring and Compliance

a) New unauthorized uses of water will be prevented through better information to the public, and by **establishing a credible monitoring and compliance program**. The program will include the installation and operation of stream flow gauges, measuring and reporting water use, ensuring the presence in the field of water masters, and issuance of orders when illegal use is observed. (See compliance and enforcement white paper.)

b) **Unauthorized water use can have a direct impact on stream flows**. If a planning unit is addressing illegal use, Ecology will actively work with the watershed unit to help identify alternative water sources or arrangements for the illegal users, and take the appropriate actions needed to protect and restore stream flows. Ecology will consult with local governments in watersheds without a watershed planning process. The agency will also initiate legal action to eliminate egregious cases of waste and unauthorized diversions and withdrawal of water.

c) The usefulness and effectiveness of **mitigation** will in large part depend on how well the plans are able to ensure flow improvements in the receiving stream. Mitigation actions will need to be monitored on a regular basis to be sure both that they are effective and effective over the long term. (See mitigation white paper.)

3. Action to Prevent Waste of Water

Water is considered “wasted” if a diversion or withdrawal of water is for a non-beneficial purpose, or is in an amount that exceeds the amount necessary for beneficial use. Statutory law repeatedly prohibits the waste of water. The state Supreme Court has ruled that there is no right associated with wasted water. The quantity allowed by permit or certificate is based on the concept of “reasonable use” and a “water duty” for each particular use. Local customary practices are a factor to consider, but are not necessarily sufficient justification.

4. Action to Prevent Misuse of Groundwater Withdrawal Exemption

Inappropriate reliance on the ground water permit exemption can take several forms. In basins closed to appropriation, the unchecked development of exempt withdrawals can cumulatively further diminish stream flows. Another inappropriate use of the exemption is when a developer establishes a water system for a subdivision using multiple exempt withdrawals when the total withdrawal will exceed 5,000 gallons per day. Exempt withdrawal issues are not equally problematic everywhere. Solutions therefore need to be crafted in accordance with each geographic situation.